(DEEMED TO BE UNIVERSITY)

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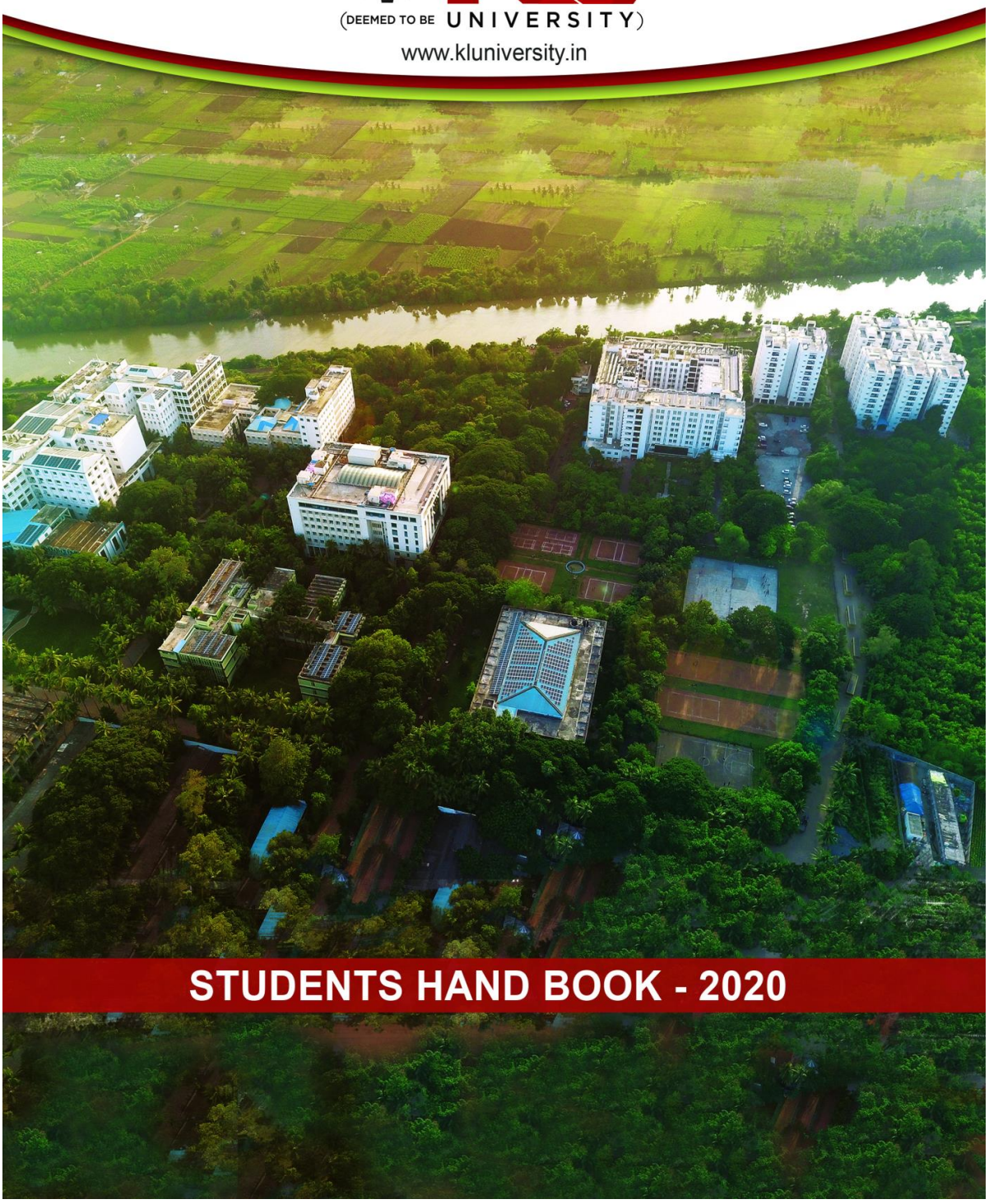


STUDENTS HAND BOOK - 2020

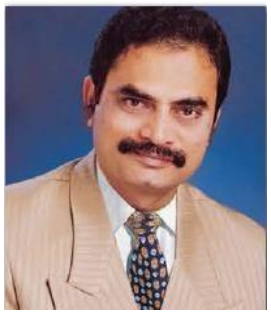
(Est. u/s.3 of the UGC Act, 1956) (NAAC Accredited "A++" Grade University)

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.



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. S.S. Mantha

Chancellor

Dr. S S Mantha, an eminent academician and an able administrator, is the former Chairman of the All India Council for Technical Education (AICTE). He joined in this Organization in 2019 as Chancellor, he has been at the forefront of bringing in some radical changes for transparency and accountability in its administration. He holds a Bachelors degree in Mechanical Engineering from the M S University, Baroda, and a Masters in Mechanical Engineering from VJTI, Mumbai.

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 various Prestigious institutes.

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.

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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	CS	Computer Science &Engineering
8	EC	Electronics & Communication Engineering
9	EE	Electrical & Electronics Engineering
10	CM	Computer Engineering
11	ME	Mechanical Engineering
12	AD	Artificial Intelligence & Data Science
13	CI	Computer Science & Information Technology
14	CGPA	Cumulative Grade Point Average
15	SGPA	Semester Grade Point Average
16	LTPS	Lecture, Tutorial(Studio for Architecture), Practical, Skill
17	SEE	Semester-End Examinations
18	SIE	Semester-In Examinations
19	OJET	On-the-job Engineering Training
20	IRP	Industrial Relations and Placements
21	PS	Practice-School
22	OPAC	Online Public Access Catalog
23	QCM	Quality Circle Meeting
24	MOOC	Massive Open Online Course
25	MOU	Memorandum of Understanding
26	OD	On Duty
27	(A,B]	Between A and B excluding value A and including value B
28	COE	Controller of Examinations
29	VLSI	Very Large Scale Integration
30	M.Tech	Master of Technology
31	COA	Council of Architecture
32	JEE	Joint Entrance Examination

33	NATA	National Aptitude in Architecture
34	PC	Professional Core
35	BSAE	Building Science and Applied Engineering
36	PE	Professional Elective
37	PAECC	Professional Ability Enhancement Compulsory Courses
38	SEC	Skill Enhancement Course
39	OE	Open Elective
40	CTIS	Cloud Technology and Information Security
41	DS	Data Science
42	IoT	Internet of Things
43	IPA	Intelligent Process Automation
44	PCI	Pharmacy Council of India
45	PY	Pharmacy
46	B.Com (H)	Bachelor of Commerce with Honors
47	ACCA	Association of Chartered Certified Accountants
48	HM	Hotel Management
49	BTK	Basic Training Kitchen
50	QTK	Quantitative Training Kitchen
51	ATK	Advanced Training Kitchen
52	MBA	Master of Business Administration
53	BBA	Bachelor of Business Administration
54	MSc (F&C)	Master of Science (Finance & Control)
55	BA	Bachelor of Arts
56	M.Sc	Master of Science

CHAPTER 1

Introduction

1.1: History

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, and Accredited by National Assessment and Accreditation Council (NAAC) of UGC as 'A^{++}' with highest Grade of 3.57 CGPA on 4 point scale in 2018 ,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".

1.1.1: 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), and 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 University has been situated on a built up area of around 15, 00,000 S. Ft.

1.2 : Hall Marks:

- **NAAC A++ Grade** with 3.57 CGPA on 4-point scale
- **CATEGORY-1** University by UGC under the categorization of universities for grant of Graded Autonomy
- UGC Recognized under section **12B** of UGC Act 1956
- Approved by MHRD & UGC (Under Section 3 of UGC act 1956)
- ISO 9001 - 2015 Certified Institution

1.3 : 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) Q Logic 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
7	Mechanical Engineering	APSSDC Dassault Systems lab, with Dassault 3 D experience suite	Design & Manufacturing, Robotics & Mechatronics
8	Mechanical Engineering	Center for system Dynamics & Condition Monitoring	Design & Manufacturing
9	Mechanical Engineering	MSC: NASTRAN/ PATRAN/ ADAMS simulation suite	Design & Manufacturing

Physical Education- Sports Facilities:

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

Sport/Game	No. of Courts	Sport/Game	No. of Courts
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	20

Archery	1	Caroms	12

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, Caroms etc.
- Power lifting/Weight Lifting

Accommodation- Hostels

- KLEF 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 is strictly prohibited.
- Strict study hours from 7.30 am 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:

- KLEF 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.

1.4 : Placements:

KLEF has meticulously planned to make all its outgoing students employed. The University had installed the infrastructure, employed well experienced faculty, designed and delivered programs that 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.

1.5 : Counseling& Career Guidance:

A special Counseling Cell consisting of professional student counselors, psychologists, and 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.

1.6 : Social Service Wing:

KLEF 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.

1.7 : 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.

1.8 : 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.

1.9 : Life Skills and Inner Engineering:

KLEF feels that it is its responsibility to mold 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 KLEF undergoes a one week special life skills /orientation program. Through this program, KLEF 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 KLEF 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 practice his/her own religious faith and be tolerant and respectful towards other religions.

1.10 : Technical Festival:

KLEF 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 KLEF is imparting organizational skills, leadership skills, competitive spirit, and team behavior skills to our students. Along with the knowledge, KLEF festivals are providing recreation

to the student community.

1.11 : Innovation, Incubation and Entrepreneurship Center:

KLEF being a pioneering institute supporting Academics and Research in Engineering, Science and Technology is endowed with the entire 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.

CHAPTER -2
LIST OF PROGRAMS

S.No	Program Code	Name of the Programme
1	001	B.Tech - Bio Technology
2	002	B.Tech - Civil Engineering
3	003	B.Tech -Computer Science and Engineering
4	004	B.Tech -Electronics and Communication Engineering
5	006	B.Tech -Electrical and Electronics Engineering
6	007	B.Tech - Mechanical Engineering
7	009	B. Design
8	010	B.Tech - Artificial Intellegence & Data Science
9	011	B.Tech - Computer Science & Information Technology
10	012	B.Tech - Computer Engineering
11	016	B. Arch.
12	017	BCA
13	018	B. Pharmacy
14	025	B.Sc.(Visual Communications)
15	052	B.Com (Honors)
16	054	BBA
17	055	BBA-LLB
18	056	BFA
19	057	BA
20	058	B.Sc(Hotel Management)
21	059	LL.B
22	060	B.Com (Computer Applications)
23	061	B.Sc(Travel & Tourism)
24	2010	M.Tech - Bio Technology
25	2021	M.Tech -Structural Engineering
26	2022	M.Tech-Construction Technology & Management
27	2028	M.Tech -Geotechnical Engineering
28	2031	M.Tech - Computer Science and Engineering
29	2035	M.Tech-Machine Learning and Computing
30	2036	M.Tech-Digital Foremsic & Cyber Security
31	2042	M.Tech - VLSI
32	2045	M.Tech - Radar & Communication
33	2061	M.Tech - Power Systems
34	2062	M.Tech - Power Electronics and Drives
35	2071	M.Tech - Thermal Engineering
36	2075	M.Tech - Machine Design
37	2076	M.Tech - Robotics and Mechatronics
38	2510	MBA
39	2230	M.Sc.(Chemistry)
40	2210	M.Sc.(Applied Mathematics)
41	2220	M.Sc.(Physics)

42	2240	M.A(English)
43	2060	M.Sc(Finance and Control)
44	2018	PHARM.D.
45	2019	M. Pharmacy
46	2059	LL.M
47	3010	Ph.D. -Bio technology
48	3020	Ph.D. -Civil Engineering
49	3030	Ph.D. -Computer Science and Engineering
50	3040	Ph.D. -Electronics and Communication Engineering
51	3050	Ph.D. -Electronics and Computer Engineering
52	3060	Ph.D. -Electrical and Electronics Engineering
53	3070	Ph.D. -Mechanical Engineering
54	3210	Ph.D. -Mathematics
55	3220	Ph.D. -Physics
56	3220	Ph.D. -Chemistry
57	3240	Ph.D. -English
58	3510	Ph.D. -Management
59	3530	Ph.D. -Law
60	3540	Ph.D. -Pharmacy

2.1: School of Architecture

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Architecture	5	10+2 or equivalent with JEE- Paper 2 score or NATA score

2.2: College of Arts & Science and Humanities

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Arts (BA)	3	10+2 or equivalent with at least 50% and must have qualified in KL entrance exam
2	Bachelor of Computer application (BCA)	3	
3	Master of Arts (MA English)	2	Any Bachelor's degree excluding Bachelor of Fine Arts, with minimum of 55% marks or equivalent CGPA
4	Master of Science (M.Sc (Chemistry))	2	Bachelor's degree in Science with 55% or Equivalent CGPA with honors / in Chemistry as one of the Course.
5	Master of Science (M.Sc (Applied Mathematics))	2	Any Bachelor's degree with 55% or Equivalent CGPA with honors / in Mathematics as one of the Course.

6	Master of Science (M.Sc (Physics))	2	Bachelor's degree in Science with minimum of 55% marks or equivalent CGPA in Physics as one of the Course.

2.3: College of Business School

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Business Administration (BBA)	3	10+2 or equivalent with at least 50% and must have qualified KL entrance exam.
2	Bachelor of Commerce with Honor's B. Com(H)	3	
3	B.Sc Hotel Management	3	10+2 or equivalent with at least 45% and must have qualified KL Entrance Exam
4	Master of Business Administration (MBA)	2	Bachelor's degree with 55% marks or equivalent CGPA and qualified any one (KLEFBSAT)/ ICET / MAT / CAT / XAT & Personal interview
5	Master of Science (Finance and Control)	2	Bachelor's degree with 55% marks or equivalent CGPA and Mathematics /Statistics as one of the course at 10+2 /UG.

2.4: College of Engineering

B. Tech-Bachelor of Technology, M. Tech -Master of Technology

S.no	Program	Duration (Years)	Eligibility
1	B.Tech in Biotechnology (BT)	4	10 +2 or equivalent at least 60% in aggregate and 60% and above (or) equivalent CGPA in Group subjects / Physics, Chemistry and Mathematics, (For BT program physics ,chemistry and biology are also eligible **)**
2	B.Tech in Civil Engineering (CE)	4	
3	B.Tech in Computer Science & Engineering (CSE)	4	
4	B.Tech in Electronics and Communication Engineering (ECE)	4	
5	B.Tech in Electrical and Electronics Engineering (EEE)	4	
6	B.Tech in Mechanical Engineering (ME)	4	
7	B.Tech in Artificial Intelligence & Data Science (AI & DS)	4	

8	B.Tech in Computer Science and Information technology (CS & IT)	4	
9	B.Tech in Computer Engineering (Com.Eng)	4	
10	B. Design	4	
11	M.Tech in Biotechnology	2	B.E/B.Tech (BT/ Chemical Engg. /Leather Technology/Bio-Tech./Industrial Bio-Tech. /Bio-Chemical Engg. /Bio-Informatics) or B.Pharm. Or M.Sc. (Ag.)/M.V.Sc. /M.Sc. in any branch of Life Sciences. With at least 55 % or equivalent CGPA
12	M.Tech in Structural Engineering	2	B. Tech (CE) with at least 55% or equivalent CGPA
13	M.Tech in Construction Technology and Management	2	
14	M.Tech in Geotechnical Engineering	2	
15	M.Tech in Computer science and Engineering	2	B. Tech / MCA/M.Sc with at least 55% or equivalent CGPA
16	M.Tech in Machine Learning and Computing	2	B. Tech (CSE/IT) or equivalent with at least 55% or equivalent CGPA
17	M.Tech in Digital Forensics & Cyber Security	2	
18	M.Tech in Radar & Communication	2	B. Tech ECE or equivalent with at least 55% or equivalent CGPA
19	M.Tech in Very Large-Scale Integration	2	
20	M.Tech in Power Systems	2	B. Tech (EEE) or equivalent with at least 55% or equivalent CGPA
21	M.Tech in Power Electronics and Drives	2	
22	M.Tech in Thermal Engineering	2	B.Tech (ME) or equivalent with minimum of 55 % marks or equivalent CGPA
23	M.Tech in Machine Design	2	B.Tech (ME) or equivalent with minimum of 55 % marks or equivalent CGPA
24	M.Tech in Robotics and Mechatronics	2	B.Tech in ME/ ECE/CM/CSE/EEE or equivalent with minimum of 55 % marks or equivalent CGPA minimum of 55 % marks or equivalent CGPA

2.5: College of Fine Arts

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Fine Arts (BFA)	4	10+2 or equivalent with at least 60% aggregate and Qualified in KL Entrance Exam
2	Bachelor of science in Visual Communication (B.Sc Vc)	3	10+2 or equivalent with at least 55 % and must qualify in KL Entrance Exam or qualified any State Level Exams across India

2.6: College of Pharmacy

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Pharmacy (B.Pharm)	4	10+2 or equivalent with at least 60% in aggregate and 60% in PCM / PCB and Qualified in any one EAMCET / NEET / Any State Level Pharmacy Entrance Exams across India
2	PHARMA. D	2	10+2 examination with Physics and Chemistry as compulsory subjects along with Mathematics or Biology
3	M. Pharmacy in Pharmaceutics	2	B.Pharmacy with 55% aggregate

2.7: College of Law

S.no	Program	Duration (Years)	Eligibility
1	Bachelor of Business Administration and Bachelor of Law (BBA-LLB)	5	10+2 or equivalent with at least 45% in aggregate Any State Level Entrance Exams across India

CHAPTER 3

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

AND

PROGRAM OUTCOMES (POs)

3.1 : Bachelor of Architecture (B.Arch)

Program Educational Objectives (PEOs)

PEO1	Should be able to stimulate artistic sensitivity and creative powers. (SKILL)
PEO2	Strengthen intellectual growth and the capacity to develop creative and responsible solutions to unique and changing problems. (EMPL)
PEO3	Acquire leadership capabilities necessary for the competent practice of architecture and lifelong learning. (ETPR)
PEO4	Pursue advanced education, research and development, and other creative and innovative efforts in the field of Architecture. (SKILL).

Program Outcomes (POs):

PO1	Ability to gain knowledge of Humanities, Sciences and Architecture and the application of knowledge in practice.
PO2	Use the elements of Architecture and apply basic principles in Architectural Design.
PO3	Identify and solve the social, economical and cultural issues in Architectural Design.
PO4	Ability to apply theoretical knowledge to achieve Architectural Design solutions.
PO5	Recognize the ethical and professional responsibilities and the norms of Architectural practice.
PO6	Ability to research, review, comprehend and report technological developments happening in the field of Architecture
PO7	Communicate effectively and work in interdisciplinary groups according to the project scale.
PO8	To guide the Building construction workforce in the right direction
PO9	Ability to understand the real-life situation in converting the On-paper design to On-site design of Architectural Practice
PO10	To make the student design aesthetically pleasing, structurally viable buildings and encourage technological advancements in the building construction industry.

Programme Specific Outcomes (PSOs)

PSO1	PS01: Ability to enhance creative design skills in attaining design solutions in architecture.
PSO2	To understand the design complexity of the designed structure and use appropriate building construction techniques and technology for the particular structure

3.2 : Bachelor of Arts (B.A)

Programme Educational Objectives

PEO1	Graduate will be able to exhibits their skills in Literature and diverse literary works.
PEO2	A graduate student able to analyze the aspects of History, Geography, Public Administration and Economy
PEO3	Graduate will be to apply knowledge, information and research skills to complex problems in the field of Social Science and Humanities.

Programme Outcomes

PO1	Provide knowledge and understanding of various fields of study in core disciplines in the Humanities and Social Sciences
PO2	Develop critical and analytical skills to identify and resolve of problems with in complex changing social, linguistic and literary context.
PO3	Understanding the general concepts and principles of selected areas of study outside core disciplines of the Humanities, Social Science and Languages
PO4	Follow independence in learning appropriate theories and methodologies with intellectual honesty and an understanding of ethical and human values
PO5	Encourage students to analyze the problems and apply this knowledge for remedies thereof
PO6	Enhance student's skills of effective communication and language learning i.e. reading, writing, listing and speaking another language with fluency and understand its cultural value.
PO7	Become well informed and updated member of the community and responsible citizen
PO8	Work with self esteem, self reliance, self reflection and creativity to face adversities in the work and personal life
PO9	Inculcate leadership and administrative abilities for their future career
PO10	Increase inclination for higher studies and research in social sciences and Gain comprehensive knowledge to succeed in competitive examinations

3.3 : Bachelor of computer applications (BCA)

Program educational objectives (PEOs)

PEO1	Practice Computer Applications in a broad range of industrial, societal and real world applications.
PEO2	Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers
PEO3	Conduct them in a responsible, professional, and ethical manner.

Program Outcomes (POs):

PO NO	Description
PO1	**Problem Analysis** :Ability to identify, formulate, research literature, and analyze complex computer application oriented problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and computer applications.
PO2	**Design / development of solutions** :Ability to design solutions for complex computer application problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
PO3	**Conduct investigations of complex problems** :Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO4	**Modern tool usage** :Ability to create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO5	**Communication** :Ability to communicate and engage effectively with diverse stakeholders.
PO6	Ability to apply ethical principles and commit to professional ethics and responsibilities.
PO7	**Life-long learning**: Ability to recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.
PO8	**Individual and teamwork**: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Programme Specific Outcomes (PSOs)

Cloud Technology and Information Security	
PSO1	An ability to use and develop cloud software, administrative features. Infrastructure services and architectural patterns; ethical hacking and forensic security technologies.
PSO2	An ability to gain knowledge on design and control strategy; techniques to secure information and adapt to the fast changing world of information technology needs.
Data Science	
PSO1	Ability to apply the knowledge of computing tools and techniques in the field of Data science for solving real world problems encountered in the Software Industries.
PSO2	Ability to identify the challenges in Data analytics with respect to IT Industry and pursue quality research in this field with social relevance.

Internet of Things	
PSO1	An ability to apply pattern recognition and artificial intelligent techniques including statistical data analysis and quantitative modelling techniques to solve real world problems from various domains such as healthcare, social computing, economics, etc.
PSO2	PSO1: An ability to apply pattern recognition and artificial intelligent techniques including statistical data analysis and quantitative modelling techniques to solve real world problems from various domains such as healthcare, social computing, economics, etc.
Intelligent Process Automation	
PSO1	An ability to apply pattern recognition, machine learning, and artificial intelligent techniques including statistical data analysis and quantitative modelling techniques to solve real world problems from various domains such as healthcare, social computing, economics, etc.
PSO2	An ability to recognize and analyze problems related to AI and ML applications along with their ethical implications

3.4 : Master of Arts (English)

Program Educational Objectives (PEOs)

PEO1	Introduce students to the professional conversation in English studies in various fields and to texts from diverse eras and cultures, with the intention of provoking and supporting their intellectual curiosity and valuing literature, language, and imagination: Students will develop a passion for literature and language. They will appreciate literature's ability to elicit feeling, cultivate the imagination, and call us to account as humans. They will cultivate their capacity to judge the aesthetic and ethical value of literary texts–and be able to articulate the standards behind their judgments.
PEO2	Critical Approaches: Students will develop the ability to read works of literary, rhetorical, and cultural criticism, and deploy ideas from these texts in their own reading and writing. They will express their own ideas as informed opinions that are in dialogue with a larger community of interpreters and understand how their own approach compares to the variety of critical and theoretical approaches.
PEO3	Research Skills: Students will be able to identify topics and formulate questions for productive inquiry; they will identify appropriate methods and sources for research and evaluate critically the sources they find; and they will use their chosen sources effectively in their own writing, citing all sources appropriately.

Program Outcomes (POs):

PO Number	Description
PO1	Gain an introductory knowledge of some of the issues explored in influential works in English language and the stylistic strategies that writers used to explore those issues.

PO Number	Description
PO2	Read complex texts actively: recognize key passages; raise questions; appreciate complexity and ambiguity; comprehend the literal and figurative uses of language.
PO3	Appreciate literary form: recognize how form and structure shape a text's meaning; appreciate how genre generates expectations and shapes meanings.
PO4	Interpret texts with an awareness of and curiosity for other viewpoints
PO5	Practice writing as a process of motivated inquiry, engaging other writers' ideas through the use of quotations, paraphrase, allusions and summary. Use sources well and cite them correctly.
PO6	Attend to a wider range of voices within interculturation.
PO7	Enjoy the experience of reading challenging literature: appreciate literature's ability to elicit feeling, cultivate the imagination, and call us to account as humans

3.5 : Master of Sciences (M.Sc Chemistry)

Program Education Outcomes (PEOs):

PEO1	To prepare students for successful practice in diverse fields of Chemical Sciences such as pharmaceutical, chemical, polymer / advanced material, energy, biotechnology and environmental engineering and in the fields of Societal expectations on time.
PEO2	To prepare students for advanced studies in Chemical sciences and its allied fields.
PEO3	To ensure our students to achieve excellence and get selected for high-ranking industrial, academic, Government and other professional positions, as well as to inculcate leadership qualities.
PEO4	To develop graduate's skills and awareness to become socially, ethically and morally responsible individual in all the challenges they take over, in our communities and in the field of chemical Sciences.

Program Outcomes (POs):

PO NO	Description
PO1	Ability to understand the scope and principle of Chemistry.
PO2	Ability to understand and implement complex chemical equations and chemical compositions.
PO3	Ability to analyze the outcomes of experiments on chemicals and their product
PO4	Ability to understand the chemicals deeply and their effects on environment and health.
PO5	Ability to connect the latest developments in Chemistry with the knowledge attained during academics and come up with better ideas.

PO NO	Description
PO6	Awareness of the impact of Chemistry in all domain of the society including environment, manufacturing, and production, etc.
PO7	Use modern techniques, decent equipments and Chemistry software's

Programme Specific Outcomes (PSOs)

PSO1	Global level research opportunities to pursue Ph.D programme targeted approach of CSIR – NET examination.
PSO2	Enormous job opportunities at all level of chemical, pharmaceutical, food products, life oriented material industries
PSO3	Specific placements in R & D and synthetic division of polymer industries & Allied Division
PSO4	Discipline specific competitive exams conducted by service commission.

3.6 : Master of Sciences (M.Sc Applied Mathematics)

Program Educational Objectives (PEOs)

PEO1	To assimilate and understand a large body of complex concepts and their interrelationships.
PEO2	Apply Advanced Mathematical Techniques to formulate, solve and analyze mathematical models of real-life problems
PEO3	To identify and apply suitable computational mathematical tools and techniques to solve various complex Engineering problems and meaningful physical interpretation.
PEO4	To Demonstrate, communicate, and work, with people having diversified backgrounds in individual and group settings, in an ethical and professional manner.

Program Outcomes (POs)

PO NO	Description
PO1	To identify, formulate, abstract, and solve mathematical problems that use tools from a variety of mathematical areas, including algebra, analysis, probability, numerical analysis and differential equations
PO2	The program prepares students for a variety of mathematical careers. The current program has three identified tracks viz: Cryptography, Data analysis, Applied Mechanics, and Ph.D preparation. Students should be prepared for employment requiring mathematical skill and sophistication at the Master's level.
PO3	Apply mathematics and technology tools (MATLAB, R, and MINITAB) to solve problems.
PO4	Ability to do research in a particular topic agreed with a Supervisor, on which the student publish a research paper in a peer reviewed indexed journal.
PO5	To maintain a core of mathematical and technical knowledge that is adaptable to changing technologies and provides a solid foundation for lifelong learning.

PO NO	Description
PO6	Promote interdisciplinary research among allied subjects related to applied mathematics
PO7	Use symbolic and numerical software as part of practical computation.

3.7 : Master of Sciences (M.Sc Physics)

Program Educational Objectives (PEOs)

PEO1	To develop strong student competencies in Physics and its applications in a technology-rich, interactive environment.
PEO2	To develop strong student skills in research, analysis and interpretation of complex information
PEO3	To prepare the students to successfully compete for employment in Electronics, Manufacturing and Teaching and to offer a wide range of experience in research methods, data analysis to meet the industrial needs

Program Outcomes (POs):

PO NO	Description
PO1	Ability to understand the scope and principle of Physics.
PO2	Ability to solve the physical problems by applying physics principles
PO3	Ability to analyze the outcomes of Physics and electronics experiments and their product.
PO4	Ability to demonstrate the knowledge in physics for managing the physics projects effectively.
PO5	Ability to connect the latest developments in Physics with the knowledge attained during academics and come up with better ideas
PO6	Ability to do research in the fields related to Materials and Electronics.
PO7	Ability to understand and solve the complexity of Solid state physics.

3.8 : BBA & BBA-MBA Integrated

Program Program Educational Objectives

PEO1	To educate the business graduates to respond effectively in meeting the competitive business needs of the society.
PEO2	To nurture the spirit of Entrepreneurship among the students that propagates the business world.
PEO3	To train the students in emerging as efficient managers equipped with innovation, rationality and application oriented decision-making in the context of the ever-changing business environment.

Program outcomes (pos):

PONO	Description
PO1	Core Business Knowledge Demonstrate competency in the underlying concepts, theory and tools taught in the core undergraduate curriculum.
PO2	Critical Thinking skills Able to define analyze and devise solutions for multifunctional business problems and issues in the areas like Marketing, Finance, Human Resources and Production.
PO3	Global Perspective Identify and analyze relevant global factors that influences decision making in International Business Perspective
PO4	Investigation of complex problems An ability to use research-based knowledge and research methods including design of innovative processes, analysis and interpretation of data and synthesis of the information to obtain solutions to organizational problems
PO5	Application of Statistical and Analytical tools Ability to create, select and apply appropriate analytical tools, techniques and methods in the modern management activities.
PO6	The Manager 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 management practices.
PO7	Legal Environment and sustainability Ability to demonstrate the knowledge of contemporary issues in legal aspects, understanding and reporting their impact on societal and environmental contexts, leading towards sustainable organizational development through entrepreneurial orientation.
PO8	Ethics & Corporate Social Responsibility An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of management practice. Identify and analyze ethical conflicts and social responsibility issues involving different stakeholders.
PO9	Individual and Team Work An ability to perform different roles effectively as an individual and a member or leader in diverse teams and in multi-disciplinary streams with entrepreneurial edge.
PO10	Communication Ability to communicate effectively oral, written reports and graphical forms on complex managerial and administrative activities.
PO11	Project Management and Finance Ability to demonstrate knowledge and understanding of the business and operational activities and having sound knowledge in the financial aspects and applying those concepts to manage projects in multi-disciplinary environments.
PO12	Lifelong Learning An ability to recognize the need for and having the preparation and ability to engage independent and life-long learning in global context of technological and organizational change.

3.9 : Bachelor of Commerce (B.Com)

Program Educational Objectives (PEOs)

PEO1	To produce best commerce (H) graduates in the country as well as in Global.
PEO2	To equip students with updated inputs in the field of accounting and finance
PEO3	To provide practical explore as per corporate needs through summer intern ship and industrial training.

Program Outcomes (POs):

PO1	Ability to understand the world of trade and commerce
PO2	Ability to apply the knowledge of Accounting, Finance and Taxation in the Global context
PO3	Ability to develop each graduate to be adept in identifying and understanding major trends in commerce in national and international level
PO4	Ability to develop each graduate to be a critical thinker and strong decision maker.
PO5	Ability to develop each graduate to be an effective and professional communicator.
PO6	An understanding of professional and ethical responsibility in business related issues
PO7	Knowledge of contemporary issues in finance and accountancy
PO8	A recognition of the need for and an ability to engage in life-long learning in commercial activities
PO9	Enhance the skills of students competent to deal with Accounting and Finance practices at global level
PO10	Develop commerce students as professional auditors and tax practitioners at national and international level

3.10 : Bachelor of Science(Hotel Management)

Program Education Outcomes (PEOs):

PEO1	Make students to be leaders in hospitality industry through industry immersion and national and international linkages in order to support business in the field of relevance.
PEO2	To intensify student`s knowledge and skills with instruction based on international standards, to produce quality graduates with balanced knowledge, skills and industry exposure in catering, hotel and management.
PEO3	Inculcate leadership skills needed for integration of hotel and restaurant development, to demonstrate community involvement in travel and tour operation, airlines and other related industries to strengthen their knowledge and skills.

Program Outcomes (POs):

PO NO.	Description
PO 1	Technical Knowledge Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.
PO 2	Quality / Cost control Knowledge of raw materials, production processes, quality control, costs, hygiene and sanitation and other techniques for maximizing the effective manufacture and distribution of goods.
PO 3	Strategic Planning Knowledge of business and management principles involved effectively in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
PO 4	Customer Service Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction
PO 5	Financial Principles Knowledge of economic and accounting principles and practices, the financial markets, banking, analysis and reporting of financial data involved in industrial sectors.
PO 6	Individual and team work Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
PO 7	Communication Knowledge of the structure and content of different language including the meaning and spelling of words, rules of composition, and grammar.
PO 8	Marketing Strategy Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
PO 9	Safety Measures Knowledge of principal methods of cleaning, controlling, recycling process, maintenance of equipment's, latest technology and its usage, safety measures to taken in hotel industry.
PO10	Tourism Industry Knowledge on Tourism, hospitality industry history, sales, promotions, Audit, general knowledge, share market, excellent skill to communicate and computer knowledge

3.11 : Master of Business Administration (MBA)

Program Educational Objectives (PEOs)

PEO1	Make students to apply techniques of business analysis, data management and problem-solving skills in order to support business management decision-making in the field of relevance.
PEO2	Inculcate leadership skills needed for implementing and coordinating organizational activities and managing change to explore business problems in

	depth for developing their functional knowledge to think strategically and to lead, motivate and manage teams across borders.
PEO3	Nurture with abilities to integrate business knowledge and management techniques to aid planning and control in a changing environment and to enhance better career paths.

Program Outcomes (POs):

PO NO	Description
PO1	Core Business Knowledge: Able to synthesize the knowledge, management skills, and tools acquired in the program, which will be helpful to shape the organizations effectively.
PO2	Career Planning and Decision Making: Able to excel in their chosen career paths, by learning on how to live, adapt and manage business environmental change through decision making.
PO3	Critical Thinking and Leadership :Able to reflect upon and explore business and research problems in depth, to demonstrate leadership skills and to demonstrate ability to pursue new knowledge necessary to succeed in dynamic domestic and international business environments.
PO4	Manager & Society: Able to emerge as efficient managers equipped with innovation, rationality and application oriented decision-making in the context of the ever-changing business environment.
PO5	Team Building & Business Communication: Able to communicate effectively and to perform different roles efficiently as an individual or in a team in multi-disciplinary streams with entrepreneurial edge.
PO6	Business perspective and Sustainability :Able to gain an understanding of professional, legal, financial, marketing, production & operational activities, logistics, ethical, social issues and responsibilities
PO7	Application of Statistical and Analytical tools: Able to gain knowledge of contemporary issues and develops an art of using current techniques, skills and necessary analytical tools for managerial practice.

3.12 : Master of Sciences (Finance & Control)

Program Educational Objectives (PEOs)

PEO1	To produce best Post graduates in Finance & Control in the country as well as in Global.
PEO2	To equip students with updated inputs in the field of accounting and finance
PEO3	To provide practical explore as per corporate needs through summer intern ship and Finance Research project

Program Outcomes (POs):

PO1	Develop each Post – Graduate student to be adept in identifying and understanding major trends in business environment both locally and

	globally
PO2	Develop Post-graduate student to be a critical thinker and strong decision maker.
PO3	Develop Post-graduate student to be an effective and professional communicator.
PO4	Create an atmosphere by which the student can become a professional entrepreneur
PO5	Enhance the ability and skills of entering into corporate world
PO6	This program would open doors for the students to enter into research and development field.
PO7	Ability to create effective professionals in the area of accounting, finance and taxation

3.13 : Engineering Under graduate Programs

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 converted into the following **Program Educational Objectives (PEOs)** which are best suited to Undergraduate Engineering programs, and are those that complement the university vision, mission.

B.Tech (B. Tech):

PEO1	Practice engineering in a broad range of industrial, societal and real-world applications.
PEO2	Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
PEO3	Conduct themselves in a responsible, professional, and ethical manner.
PEO4	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Program Outcomes (POs):

PO NO	Description
PO1	.**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
PO2	**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
PO3	**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
PO4	**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
PO5	**Modern tool usage** :Ability to create, select and apply appropriate techniques, resources and modern engineering activities, with an understanding of the limitations
PO6	**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
PO7	**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
PO8	**Ethics** : An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice
PO9	**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
PO10.	**Communication** :Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities
PO11.	**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
PO12	**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	
PSO1	Graduates will be able design, perform experiments, analyze and interpret data for investigating complex problems in biotechnology Engineering and related fields.
PSO2	Graduates will be able to justify societal, health, safety and legal issues and understand his responsibilities in biotechnological engineering practices.
Civil Engineering	
PSO1	Function as design consultants in construction industry for the design of civil engineering structures.
PSO2	Provide sustainable solutions to the Civil Engineering Problems.
Computer Science & Engineering	
PSO1	An ability to design and develop software projects as well as Analyze and test user requirements.
PSO2	An Ability to gain working Knowledge on emerging software tools and technologies.
Electronics & Communication Engineering	
PSO1	An ability to Understand the theoretical and mathematical concepts to analyze real time problems.
PSO2	An Ability to Design and Analyze systems based on the theoretical and Practical Knowledge
Computer Engineering	
PSO1	Ability to design systems and desired needs for sustainable development and engineering solutions to the problems using knowledge and skills developed in thrust areas..
PSO2	Ability to solve Electronics Engineering problems using the latest hardware and software tools, to achieve cost effective and optimal solutions in the domain of Internet of Things and hardware security.
Electrical & Electronics Engineering	
PSO1	Knowledge and hands on competence in simulating, developing, Testing, operation and maintenance of Electrical & Electronics systems.
PSO2	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	
PSO1	An ability to demonstrate the knowledge, skill to analyze the cause and effects on machine elements, processes and systems.
PSO2	An ability to apply the acquired Mechanical Engineering knowledge for the advancement of society and self.
Artificial Intelligence and Data Science	
PSO1	An ability to design and develop Artificial Intelligence technology into innovative products for solving real world problems.
PSO2	An ability to design and develop Data Science methods for analyzing massive datasets to extract insights by applying AI as a tool
Computer Science & Information Technology	
PSO1	An ability to Identify, Design, and Analyze complex computer systems, Implement and Interpret the results from those systems.

PSO2	An ability to select and apply current techniques, skills, and tools necessary for computing practice and integrate IT-based solutions into the user environment effectively.

3.14 : Engineering Post graduate Programs

Master of Technology (M.Tech)

The Programme Educational Objectives (PEOs) are the statements that describe the expected achievements from the programme. They are guided by global and local needs, vision of the Institution, long term goals etc.

The Programme Educational Objectives of M.Tech Programme:

PEO1	To mould the students to become effective global science students in the competitive environment of modern society.
PEO2	To provide students with strong foundation in contemporary practices of Science, different functional areas and scientific environment
PEO3	To emphasize on application oriented learning.
PEO4	To develop communication, analytical, decision-making, motivational, leadership, problem solving and human relations skills of the students.
PEO 5	To inculcate professional and ethical attitude in students.
PEO6	To pursue lifelong learning as a means of enhancing knowledge and skills necessary to contribute to the betterment of profession

M.Tech Bio Technology

Programme outcomes:

PO NO	Description
PO1	Ability to practically apply various Biotechnological concepts.
PO2	Demonstrate knowledge of innovative and modern bioengineering practices.
PO3	Synergize biological sciences with engineering and solve various societal and health problems.

M.Tech -Structural Engineering

Programme Outcomes

PO NO	Description
PO1	An ability to independently carry out research /investigation and development work to solve practical problems.
PO2	An ability to write and present a substantial technical report/document
PO3	Students should be able to demonstrate a degree of mastery for designing and solving structural engineering problems.
PO4	An ability to use appropriate modern tools in structural engineering. In doing so he should demonstrate sufficient knowledge of competing tools and their relative merits and demerits
PO5	An ability to demonstrate the traits of learning and unlearning throughout his professional career, and be willing to learn new techniques, methods and processes

PO6	Tune his knowledge to be a responsible engineer adhering to all established practices of his profession

M.Tech -Construction Technology & Management
Programme Outcomes

PO NO	Description
PO1	An ability to independently carry out research /investigation and development work to solve practical problems.
PO2	An ability to write and present a substantial technical report/document.
PO3	Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program
PO4	Students should be able to understand how to implement construction process using effective and efficient project planning tools, they will able to identify the activities and coordinate resources and create goals and objectives to complete individual task
PO5	Students should be able to understand how to use mathematics logic and technology to help effectively and efficiently analysis the project and solve problems required for technical tasks
PO6	Students should be able to understand concepts related to running sustainable projects and business

M.Tech - Geotechnical Engineering

Programme Outcomes

PO NO	**Description**
PO1	Independently carry out research /investigation and development work to solve practical problems.
PO2	Write and present a substantial technical report/document
PO3	Demonstrate a degree of mastery over Geotechnical Engineering
PO4	Identify Engineering solutions to problematic soils and provide suitable foundation
PO5	Apply modern tools for designing geotechnical structures
PO6	Work in inter-disciplinary engineering teams with social responsibility and ethical values and pursue lifelong learning

M.Tech- Computer Science Engineering

Program Outcomes

PO NO	**Description**
PO1	Apply the knowledge of computer engineering principles and paradigms in the design of system components and processes that meet the specific needs of the industry.

PO2	Identify, analyze and formulate solutions to complex engineering problems using innovative and emerging technologies.
PO3	Effectively communicate technical information in speech, presentation and documentation.
PO4	Extract information relevant to novel problems and apply appropriate research methodology to develop scientific knowledge.
PO5	Self-learn and pursue higher studies to upgrade qualifications and attain constructive growth in profession.
PO6	Make valuable contributions to design, developer by practicing related engineering applications and algorithmic methods.
PO7	Provide exposure to latest tools and technologies based on the industry needs and contribute to valuable research findings in the specialized domains.

M.Tech – Machine Learning and Computing

Program outcomes:

PO NO	Description
PO1	Apply the knowledge of computer engineering principles and paradigms in the design of system components and processes that meet the specific needs of the industry.
PO2	Identify, analyze and formulate solutions to complex engineering problems using innovative and emerging technologies.
PO3	Effectively communicate technical information in speech, presentation and documentation.
PO4	Extract information relevant to novel problems and apply appropriate research methodology to develop scientific knowledge.
PO5	Self-learn and pursue higher studies to upgrade qualifications and attain constructive growth in profession.
PO6	Make valuable contributions to design, developed by practicing related engineering applications and algorithmic methods.
PO7	Provide exposure to latest tools and technologies based on the industry needs and contribute to valuable research findings in the specialized domains.

M.Tech-Digital Forensics & Cyber Security

Program outcomes:

PO NO	Description
PO1	Apply the knowledge of computer engineering principles and paradigms in the design of system components and processes that meet the specific needs of the industry.
PO2	Identify, analyze and formulate solutions to complex engineering problems using innovative and emerging technologies.
PO3	Effectively communicate technical information in speech, presentation and documentation.
PO4	Extract information relevant to novel problems and apply appropriate research methodology to develop scientific knowledge.
PO5	Self-learn and pursue higher studies to upgrade qualifications and attain constructive growth in profession.
PO6	Make valuable contributions to design, developed by practicing related engineering applications and algorithmic methods.
PO7	Provide exposure to latest tools and technologies based on the industry needs and contribute to valuable research findings in the specialized domains.

M.Tech - Radar & Communication

Programe Outcomes:

PO NO	Description
PO1	An ability to identify, formulate, research literature, analyze complex engineering problems in the area of communications and RADAR to cater national and industrial needs.
PO2	An ability to develop solutions for complex problems in communication system design and RADAR system component or processes that meet the specified needs considering.
PO3	Ability to create and apply appropriate techniques using modern industrial and research tools for modeling and testing of antennas, communications system modules and RADAR systems.
PO4	An ability to design the experiments, analysis and interpretation of data and synthesis of the information using various modern and industrial tools to obtain solutions for complex problems in industries, military and social needs.
PO5	Ability to apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues, ethical principles of engineering practices and the consequent responsibilities relevant to the RADAR engineering.

PO6	Exposure to prerequisite math's and a mathematically rigorous approach to communication theory will provide him with all the necessary background to pursue a career in any field of communications going forward in his career.
PO7	An ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings for project management by demonstrating the knowledge and understanding of principles of communication systems and radar, and apply those one's own work, as a member and leader in team, to manage projects and in multi-disciplinary environments.

M.Tech Program VLSI

Programe Outcomes:

PO NO	Description
PO1	Apply the knowledge of science, mathematics, and engineering principles for developing problem solving attitude and get sound knowledge in the theory, principles and applications of VLSI Circuits and Systems.
PO2	Configure recent EDA tools, apply test conditions, deploy and manage them.
PO3	Design and conduct experiments, analyze and interpret data, imbibe programming skills for development of simulation experiments.
PO4	Ability to demonstrate the knowledge of engineering solutions, and function as a member of a multidisciplinary team with sense of ethics, integrity and social responsibility.
PO5	To develop, design and implement projects with given specifications, in order to cater industrial needs.
PO6	Ability to investigate develops and carries out research to solve industrial problems related to designing and testing of VLSI systems.
PO7	Design a system, component or process as per social needs and specifications and also will be aware of contemporary issues.

M.Tech - Power Systems:

Program Outcomes (Po's)

PO NO	Description
PO1	Acquire in- depth knowledge in the domain of power systems and understanding of engineering principles for project management.
PO2	Ability to critically analyze various power system components, models and their operation.
PO3	Ability to apply fundamentals and concepts to analyze, formulate and solve complex problems of electrical power systems and its components

PO4	Apply advanced concepts of electrical power engineering to analyze, design and develop electrical components, apparatus and systems to put forward scientific findings at national and international levels.
PO5	Ability to use advanced techniques, skills and modern scientific and engineering tools for professional practice.
PO6	Preparedness to lead a multidisciplinary scientific research team, communicate and lifelong learning effectively.

M.Tech – Power Electronics and Drives

Program Outcomes

PO1	Apply the knowledge of science and mathematics in designing, analyzing and using the power converters and drives for various applications for problem solving
PO2	Design the modern electric machines, drives, power converters, and control circuits for specific applications
PO3	Use modern tools, professional software platforms, embedded systems for the diversified applications
PO4	Function as a member of a multidisciplinary team and correlate the domain knowledge for global problems.
PO5	Demonstrate the communication at different levels effectively
PO6	Explore ideas for inculcating research skills and appreciate, critical and independent thinking and engage in lifelong learning.

M.Tech. – Thermal Engineering

Program Outcome's

PO1	Advanced knowledge of a broad range of modelling methodologies, and underlying mechanical science, commonly used in the development and analysis of Thermal engineering systems.
PO2	Knowledge of fundamental design issues relevant to Thermal engineering, and an understanding of how to formulate and analyse design solutions in various engineering contexts.
PO3	Working knowledge of a range of modern mathematical methods and tools used in the development and analysis of Thermal engineering systems.
PO4	In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.
PO5	Knowledge of basic research and development principles and practices relevant to mainstream engineering industry.
PO6	Knowledge of key professional, safety and ethical issues arising in modern engineering industry.

PO7	Knowledge of time-management and work planning issues related to the organisation, implementation and successful completion, including reporting, of an individual, Masters level, engineering based project.

M.Tech. – Robotics and Mechatronics

Program Outcome's

PO NO	Description
PO1	Advanced knowledge of a broad range of modelling methodologies, and underlying mechanical science, commonly used in the development and analysis of mechatronic engineering systems.
PO2	Knowledge of fundamental design issues relevant to mechatronic engineering, and an understanding of how to formulate and analyse design solutions in various engineering contexts.
PO3	Working knowledge of a range of modern mathematical methods and tools used in the development and analysis of mechatronic engineering systems.
PO4	In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.
PO5	Knowledge of basic research and development principles and practices relevant to mainstream engineering industry.
PO6	Knowledge of key professional, safety and ethical issues arising in modern engineering industry.
PO7	Knowledge of time-management and work planning issues related to the organization, implementation and successful completion, including reporting, of an individual, Masters level, engineering based project.

M.Tech – Machine Design

Program Outcome's

PO1	Advanced knowledge of a broad range of modelling methodologies, and underlying principles of mechanics, commonly used in the development and analysis of mechanical machines and systems.
PO2	Knowledge of fundamental design issues relevant to machine or mechanical component, and an understanding of how to formulate and analyse design solutions in various engineering contexts.
PO3	Working knowledge of a range of modern mathematical methods and tools used in the development and analysis of machines and mechanical systems.
PO4	In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.

PO5	Knowledge of basic research and development principles and practices relevant to mainstream engineering industry.
PO6	Knowledge of key professional, safety and ethical issues arising in modern engineering industry.
PO7	Knowledge of time-management and work planning issues related to the organisation, implementation and successful completion, including reporting, of an individual, Masters level, engineering based project.

3.15 : Bachelor Fine Arts

Programme Educational Objectives (PEO's)

PEO1	Graduate Apply appropriate communication skills across settings, purposes, and audiences.
PEO2	Graduates shall promote professionalism in the practice of Fine Arts.
PEO3	Graduates with sense of responsibility and rooted in community involvement with a global perspective.
PEO4	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Programme Outcomes (PO's)

PO1	Building a solid foundation in the elements, principles and process of visual design
PO2	Communicate effectively with clients and utilize the talents and strengths of design colleagues to develop the best design products.
PO3	Applying fundamentals to solve increasingly complex design problems in technologically innovative ways
PO4	Engage in critical analysis of their own and their peer's creative work.
PO5	Explore media, communication and dissemination techniques to entertain via written, oral and visual media.
PO6	Apply design principles to software in a manner that provides the skills to adapt to the newest technologies in expectation for the technologies which will emerge in the future.
PO7	Understanding of and ability to develop strategies for planning, producing, and

	Disseminating visual communications.
PO8	Understand and prepare production management for artworks for hassle free delivery of works
PO9	Ability to design solutions for the development of current society and a design which is functional in the growth of acting society
PO10	Engage in the practicing of ethical professionalism in the creative world
PO11	Ability to understand the Global Scenario and get updated time to time
PO12	Ability to carry out research study and fill in the void thus developing new dimensions in applied arts and crafts.

3.16 : Bachelor of Science (Visual Communication)

PEO1	Graduate Apply appropriate communication skills across settings, purposes, and audiences.
PEO2	Graduates shall promote professionalism in the practice of Visual Communication.
PEO3	Graduates with sense of responsibility and rooted in community involvement with a global perspective.
PEO4	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Programme Outcomes (PO's)

PO1	Building a solid foundation in the elements, principles and process of visual design
PO2	Communicate effectively with clients and utilize the talents and strengths of design colleagues to develop the best design products.
PO3	Applying fundamentals to solve increasingly complex design problems in technologically innovative ways
PO4	Engage in critical analysis of their own and their peer's creative work.
PO5	Explore media, communication and dissemination techniques to entertain via written, oral and visual media.
PO6	Apply design principles to software in a manner that provides the skills to adapt to the newest technologies in expectation for the technologies which will emerge in the future.
PO7	Understanding of and ability to develop strategies for planning, producing, and disseminating visual communications.
PO8	Understand and prepare production management for artworks for hassle free delivery of works

PO9	Ability to carry out research study and fill in the void thus developing new dimensions in communications.
PO10	Engage in the practicing of ethical professionalism in the creative world

3.17 : Bachelor of Pharmacy (B.Pharm)

Program Educational Objectives

PEO1	To produce pharmacist workforce competent for the society.
PEO2	To produce pharmacy graduates with employable skills and high technical Competence in pharmaceutical industry and health care sectors
PEO3	To inculcate research activity and develop passion for discovery and innovations
PEO4	To develop entrepreneurship qualities that support growth of pharmaceutical intellectual property and contribute for economic development throughout the world

Program Outcomes (POs):

PO 1	Pharmacy Knowledge: Provide basic knowledge for understanding the principles and their applications in the area of Pharmaceutical Sciences and Technology.
PO 2	Technical Skills: Develop an ability to use various instrument and equipment with an in-depth knowledge on standard operating procedures for the same.
PO 3	Modern tool usage: Develop/apply appropriate techniques, resources, and IT tools including prediction and modeling to complex health issues and medicine effect with an understanding of the limitations.
PO 4	Research and Development: To demonstrate knowledge of identifying a problem, critical thinking, analysis and provide rational solutions in different disciplines of Pharmaceutical Sciences and Technology
PO 5	Lifelong Learning: Develop an aptitude for continuous learning and professional development with ability to engage in pharmacy practice and health education programs
PO 6	Communication: Communicate effectively on health care activities with the medical community and with society at large, to comprehend drug regulations, write health reports and provide drug information
PO 7	The Pharmacist and Society: Apply reasoning informed by the contextual knowledge to comprehend medical prescription, perform patient counselling and issue or receive clear instructions on drug safety and the consequent responsibilities relevant to the professional pharmacy practice.
PO 8	Ethics: Follow the code of ethics and commit to professional values and responsibilities and norms of the pharmacy practice.
PO 9	Environment and Sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 10	Pharmaceutical product development: To apply the knowledge of manufacturing, formulation and quality control of various pharmaceutical and

	cosmetic products.
PO 11	Competitive skills: Develop problem-solving skills and aptitude to participate and succeed in competitive examinations.
PO 12	Invention and Entrepreneurship: Application of technical skills to integrate health care systems, design an effective product with commercial advantage and societal benefit, perform risk analysis and become entrepreneur.

Doctor of Pharmacy (PHARM.D)

Programme Educational Objectives (PEO's) - Pharm. D.

PEO1	To provide a comprehensive pharmaceutical education leading to Doctor of Pharmacy (Pharm. D.) degree.
PEO2	To provide hands on training through state of art infrastructure to meet challenges of drug discovery and pharmaceutical care.
PEO3	To integrate knowledge and skills with clinical research to promote health care.
PEO4	Understand and appreciate the role of health care education in the development of society and on mankind's welfare. To inculcate leadership capabilities as member of health care team.

Programme Outcomes (PO's) - Pharm. D.

PO1	**Life Sciences Knowledge:** Impart fundamental knowledge of physiology, anatomy, formulation science, and applied biochemistry, Chemistry of organic and inorganic compounds as per the monographs.
PO2	**Pathology and Pharmacology Knowledge:** Impart a thorough knowledge of relevant aspects of pathophysiological mechanisms, application of microbiology in pharmacy field, medical uses of natural drugs, and Pharmacological aspects of drugs.
PO3	**Community Pharmacy Knowledge:** To improve skills such as dispensing of drugs, ensure safe medication usage, patient counseling and improve patient care in community pharmacy set up.
PO4	**Clinical Pharmacist Knowledge:** To enhance practical clinical discussions, attending ward rounds, follow-up progress of patients, case presentation at discharge are imbibed through hospital postings. Participation in hospital camps, disease awareness programs will inculcate the social responsibility of the clinical pharmacists.
PO5	**Environment and Sustainability:** To understand the instrumental techniques applied in Good Laboratory Practice and following ICH-GCP guidelines, total quality management, quality review and documentation and study of regulatory bodies such as Drugs and Cosmetics Act, CDSCO guidelines, pertaining to regulatory environment.

PO6	**Design/Development of solutions:** To study the modern concept of rational drug design such as Quantitative Structure Activity Relationship, Computer Aided Drug Design and concept of antisense molecules .
PO7	**Investigations of Complex Problems:** To understand biopharmaceutical principles and pharmacokinetic principles through different compartment models, multiple dosage regimens, non-linear pharmacokinetics, and assessment of bioavailability and bioequivalence.
PO8	**Toxicology Knowledge:** To understand the toxicological aspects of individual class of xenobiotics such as pesticides, opiates, NSAIDs, Caustics, radiation, heavy metals, plant, food poisonings, snake bites, and envenomations.
PO9	**Ethics:** To understand the clinical aspects of drug development, such as phases, ethical issues, and roles and responsibilities of clinical trial personnel, design of clinical study documents, data management and safety monitoring in clinical trials.
PO10	**Problem Analysis and Learning:** In house scientific and social poster competition, Case study presentations, prescription auditing, and contribution to drug information centre.

Program Specific Outcomes (PSO's) - Pharm. D.

PSO1	Preparation of individualized therapeutic plans based on diagnosis, monitoring therapy, through identification of alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects.
PSO2	To detect, assess, and monitor adverse drug reactions, interpret selected laboratory results of specific disease states, retrieve, analyze, interpret and formulate drug or medicine information. To apply the pharmacoepidemiological methods like drug utilization review, cohort studies, meta-analysis, prescription event monitoring and study on vaccine safety, risk management and drug induced birth defects, pharmacoeconomic evaluation for cost minimization, cost-benefit, cost-effectiveness, and cost-utility evaluations.
PSO3	To improve patient care in performing medication history, interpretations of laboratory data of biological samples, identifying potential-drug related influences of Pharmacotherapy. To contribute for research and progress in higher studies, career, or entrepreneurship.

Master of Pharmacy (M.PHARM) - PHARMACEUTICS

PEO1	**Knowledge & Understanding:** The pharmacy students should possess upon graduation, knowledge of pharmaceuticals, medication use and their safety and effectiveness.
PEO2	**Skill:** The graduate should be able to demonstrate his skills in providing quality pharmaceuticals, drug information and therapy including legal and

	ethical aspects.
PEO3	**Attitude:** The graduate should be able to inculcate the current knowledge, changes in technology, continuous upgrading of professional information and participation in implementation of National health programmes.

Programme Outcomes (PO's) - M.Pharm Pharmaceutics

PO1	**Pharmaceutical Sciences Knowledge:** Apply the knowledge of mathematics, science, pharmaceutical physical properties of the different pharmaceutical ingredients and the factor influencing them is very valuable for pharmaceutical dosage form design. Enables the students to learn about different packaging materials used in pharmaceutical industry and the factors governing their use.
PO2	**Unit Operations:** Pharmaceutical engineering renders knowledge about the basic unit operations that are taking place in pharmaceutical industry and the different factors associated with it. This information is useful for both pharmaceutics and pharmaceutical engineering.
PO3	**Entrepreneurship:** The knowledge on different pharmaceutical dosage forms are imparted on students. This knowledge comes while handling a pharmacy or a manufacturing unit or in the further courses.
PO4	**Design/Development of solutions:** The information on solid dosage forms like tablets and capsules, their formulation and quality control serves as an important perquisite for dosage form design.
PO5	**Application oriented Knowledge:** The knowledge of bio-pharmaceutics enables the students to visualize the effect of pharmacokinetic (ADMET) parameters on the biological effect of the drug. The correlation of pharmacokinetics and pharmacodynamics is thus introduced and is experimentally explained to them.
PO6	**Conduct investigations of complex problems:** To understand biopharmaceutical principles and pharmacokinetic principles through different compartment models, multiple dosage regimens, non-linear pharmacokinetics, and assessment of bioavailability and bioequivalence.
PO7	**Effective Citizenship:** Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO8	**Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO9	**Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.
PO10	**Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

Program Specific Outcomes (PSO's) - M.Pharm Pharmaceutics

PSO1	**Knowledge and skills:** To impart knowledge and skills on criteria for formulation design, product development, evaluation, and optimization for better therapeutic efficacy.
PSO2	**Research & Career:** To create a talent pool by involving students in research projects and to make students to undertake research projects for scientific contribution to society. To foster ambitious desire among students to undertake higher studies, career growth and life-long learning.
PSO3	**Entrepreneurship:** Set-up pharmaceutical production unit to design and formulate pharmaceutical dosage forms. Validate the knowledge and skills gained through education to gain recognition in Pharmaceutical society and related field.

3.18 : Bachelor of Business Administration – Bachelor of Law (BBA-LLB)

Program Education Outcomes (PEOs):

PEO1	Should be able to stimulate compassion and creativity in the field of legal profession.
PEO2	Strengthen intellectual growth and the capacity to develop ingenious and conscientious legal solutions to unique and varying tribulations of society and business environment
PEO3	Acquire leadership capabilities necessary for the competent practice of law and lifelong learning in practice
PEO4	Pursue advanced education, research and development, and other innovative and pioneering efforts in the field of law

Program Outcomes (POs):

PO NO	Description
PO1	Ability to gain knowledge of law and the application of such knowledge in practice
PO2	Be proficient to use the fundamentals and vital principles in law;
PO3	Identify and solve the social, economic and cultural issues in law;
PO4	Ability to synthesis academic knowledge to legal problems and find solutions;
PO5	Recognize the ethical and professional responsibilities and the norms of advocacy;
PO6	Ability to research, review, comprehend and utilize such knowledge for Law reform;
PO7	Converse effectively and work in inter-disciplinary groups and legal institutions;
PO8	To guide the trainee legal practitioners in the right direction;
PO9	Ability to understand the real-life situation in legal profession and practice;
PO10	To make the student to learn aesthetically pleasing practice and make it socially relevant;

Programme Specific Outcomes (PSOs)

5 Year BB.A, LL.B PROGRAMME	
PSO1	To equip skills required to deal with a fast-changing business environment and legal arena;
PSO2	To acquaint with technological developments and to make suitable changes in the field of law and legal profession.

CHAPTER 4

ACADEMIC REGULATIONS

This document supplements the KLEF rules and regulations to provide assistance to all 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 has zero credits and has a "Satisfactory" or an "Unsatisfactory" 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. (Describe elaborately)

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 report written by students that evolves their 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 5

ACADEMIC INSTRUCTIONS

5.1 General Behavior

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 campus.
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.

5.2 KLEF Working Hours

KLEF operates between 7:20 AM to 5.00 PM on all week days.

5.2.1 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.

5.2.2 Laboratory Environment

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

l. 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.
m. Eating in laboratories is strictly prohibited.
n. Proper dress code is to be followed as prescribed by faculty in each lab.
o. Students should familiarize themselves with the location of all safety equipment which may be available.
p. Follow evacuation procedures quickly and quietly, if needed.
q. Students should always conduct themselves in a responsible and cautious manner. Risky behaviors such as pushing, running, jumping etc., are unwarranted.
r. Only materials required to complete and record the experiment instructions, (e.g. pencils or graph paper, etc.) should be brought into the laboratory.
s. Equipment must be carefully handled to prevent breakage or damage, otherwise appropriate penalties/disciplinary-action may believed/imposed.
t. Lab station must be cleaned prior to leaving a lab.
u. Any accident, no matter how small or big, must be reported to the concerned faculty immediately.

5.3 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 reserves the right to register.
d. Registration for add/drop/change of a course will be permitted only within one week from the scheduled date of commencement of classes.
e. Students can register up to a maximum of 32 credits of their choice in a semester to meet their program requirements.
f. Students, who wish to register for additional credits through Overloading or less credits through Under loading, must seek prior permission from Dean-Academics.
g. Students who have opted for minor degree, Honors degree, can register for more number of credits in a semester through Overloading.
h. KLEF reserves the right to withdraw within one week of the commencement of the semester any elective course offered, 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.

   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 6

Requirements for the award of Degree

For all Programs the following are the requirements

- ✓ The student should complete all mandatory courses (University Core, College Core and Departmental Core) as prescribed in the curriculum of the respective department.
- ✓ The Student must participate in social service activities for a minimum duration of 40 hours.

Apart from the above for all PG Programs the following requirements are also must be satisfied.

- ✓ Must have published a minimum of one publication (along with Supervisor) in Scopus indexed Journal.

And the following criteria must be fulfilled for the various programs as given against the program name.

	Name of the program	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total Credits	Minimum CGPA required
1	Bachelor of Architecture	10	-	6	-	0	-	-	38	155	-	-	4	-	-	61		274	5.25
2	Bachelor of Arts	48	10						4				59					121	5.25
3	Bachelor of Computer Applications			8					14				21	4		88		135	5.25
4	Master of Arts (English)	24							15							91		130	5.5
5	Master of Science (Chemistry)			9					6							82		97	5.5
6	Master of Science (Applied Mathematics)			12					15							64		91	5.5
7	Master of Science (Physics)	9							10							75		94	5.5
	Master of Science (Finance & Control)		3						12			20	3			74		112	5.5
8	Bachelor of Business Administration	15							18				21	10		69		133± 5	5.25
9	Bachelor of Business Administration (Business Analytics)	43							26				18	10		38		135	5.25
10	Bachelor of Business Administration (Strategic Finance)	31							18				21	10		57		137	5.25
11	Bachelor of Business Administration (Logistics)	9							102				7	6		47		171	5.25
12	Bachelor of Commerce (H)	10	9			2			18				9	5		96		149	5.25

13	B.Com with ACCA	10	9			2			6			20	9	5		120		181	5.25
14	Bachelor of Science (Hotel Management)	4	4			3			30				17	6		70		134	5.25
15	Master of Business Administration	36							12				4	9		45		106± 5	5.5
16	Master of Business Administration (Innovation, Entrepreneurship &Venture Development)	15	12						50							27		104	5.5
17	B.Tech	15-18	6	6	4	2	-	-	20	2.5	20	20	12	28± 5	31± 6	31-48	0-12	170±5	5.25
18	B.Tech (Lateral Entry)	-	-	-	-	-	-	-	-	-	-	-	-	-	-			125±5	5.25
19	B.Tech(Hons)	12	6	6	3	2	3	1	16	-	20	-	16	21± 5	30± 5	59*	12	185± 5	8.5
20	B.Tech(Minor)	12	6	6	3	2	3	1	16	-	20	-	16	21± 5	30± 5	59$	12	185± 5	6.75
21	B.Tech(Specilization)	18@	6	6	3	2	3	1	16	-	20	-	16	21± 5	30± 5	39	12	171± 5	6.75
22	M.Tech	12							42				32					84	5.5
23	Bachelor of Fine Arts (BFA)																		
24	Animation	38							20				19	1		91		169	5.25
25	Filmmaking	42							20				19	1		91		173	5.25
26	Painting	42							16				19	1		85		163	5.25
27	Sculpture	42							16				19	1		85		163	5.25
28	Bachelor of Science – Visual Communications																		

29	Advertising	12							22				16	1		78		129	5.25
30	Animation	12							22				16	1		78		129	5.25
31	Filmmaking	12							22				16	1		78		129	5.25
32	Bachelor of Pharmacy (B.Pharm)	8	3						24							181-183		222-224	5.00
33	Master of Pharmacy (M.Pharm) Pharmaceutics		12-17						19			48				16		95-100	5.00
34	Pharm.D		1						34					4-7				130	5.00

*** In the core of that same branch of engineering.**

$ 20 credit should be from the core of another branch of engineering.

@ All electives must be from same stream of specialization.

A. Professional elective courses
B. Skilling course
C. Open electives
D. Management electives
E. Foreign language elective
F. Certificate course for domain
G. Certificate course yoga /sports/fine arts
H. Industrial training / term paper/ project / practice school
I. Studio
J. Honors
K. Specialization
L. Humanities & social sciences
M. Basic sciences
N. Engineering sciences
O. Professional core
P. Flexi-core

B.Tech Degree with specialization is offered in the following areas:

S. No.	Area of Specialization	Offered to the Department of
1	Genetic Engineering	BT
2	Industrial Biotechnology	BT
3	Bioinformatics	BT
4	Medical Biotechnology	BT
5	Structural Engineering	CE
6	Geotechnical Engineering	CE
7	Water & Environmental Engineering	CE
8	Construction Technology & Management	CE
9	Transportation Engineering	CE
10	Artificial Intelligence & Machine Learning	CS,EM, ME,AD,CI,EE
11	Cloud & Edge Computing	CS,EM, AD,CI
12	Network Security	CS,EC,EE,EM,AD,CI
13	Data Science And Big Data Analytics	CS,EC,EM,AD,CI,EE
14	Software Modelling & Devops	CS,EM, AD,CI
15	IOT	CS,CM,CI,AD,ME,EE
16	VlSI	EC,EE
17	Renewable energy & Smart cities	EC,ME,CE,EE
18	Signal Processing	EC
19	Robotics & Automation	EC,ME,EE
20	Bio-Medical Instrumentation	EC,EE,CM,ME
21	Rf & Microwave	EC
22	Data Communication	EC,EE,CM
23	Web Technologies	CS,CM,CI,AD
24	Industrial Automation	EE,ME
25	Green Energy Technologies	EC,CM,EE, ME
26	Smart Grid Technologies	EC,CM,EE
27	Electric Vehicle Technologies	EE,ME
28	Engineering Design	ME
29	Smart Manufacturing	ME
30	Automobile Engineering	ME
31	Autotronics	ME,EE, CS, EC
32	Product Design	ME
33	Autonomous Systems	AD,CI,ME
34	Geo-Spatial Data Analytics	AD,CI
35	Medical Intelligence	AD,CI
36	Iot Analytics	AD,CI
37	Distributed Ledger Analytics	AD,CI
38	Social & Digital Media Analytics	AD,CI

CHAPTER 7

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.

7.1 Program Structure

a. An Academic Year is made of Two semesters each is of, approximately 16±1 week duration and each semester is classified as:
    - Odd Semester (July –December)
    - Even Semester (December – May).

b. KLEF may offer summer term between May and June.

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

d. Students have the flexibility to choose courses of their own choice prescribed by the KLEF.

e. From 3rd Semester onwards a student can register for a maximum of 30 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).

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

g. 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 Practical 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 next integer.
    - Every (ST) Studio hour is equivalent to one and a half credit.

h. Audit Courses

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

i. 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.

j. Value-Added courses:

Courses leading to global 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 are part of the graduation requirements. Refer Section 3.1 for list of Value-added courses.

k. 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.

7.2 Course Precedence

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

1.Every course can have one or more of its preceding course(s) as pre- requisite(s).

2.To register for a course, the student must successfully be promoted in the course(s) earmarked as pre-requisite(s) for that course.

7.3 Summer Term Courses

KLEF offers summer term courses during 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. 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.

7.4 Practice School

The Practice School (PS) program forms an important component of education at KLEF. It is an attempt to bridge the gap between an academic institution and the industry. 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 as per the discretion of the concerned industry.

7.4.1 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.

7.4.2 Eligibility:

For B.Tech Program

a. Students who have not registered with placement (IRP) can only apply for PS-1 in (VII semester).
b. Students who have registered with placement (IRP) and after getting placement will be allowed in PS-2 (VIII semester).

For Except (B.Tech), the remaining UG & PG Programs

As per the academic program eligibility, the final year students are only eligible to register for Practice School over the period of one /two semesters.

7.4.3Guidelines

The following guidelines are followed attending Practice-School.

a) Practice School program carries06 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.

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

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

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

e) 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.

f) 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.

g) 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.

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

i) 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.

7.5 Award Of Degree

7.5.1 For B.Tech, M.Tech, B.Arch, all B.sc and M.sc , Arts,B.com, MBA:

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

a. $5.5 \leq CGPA < 5.75$ 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. $CGPA \geq 7.75$ 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 program specified minimum years duration.

7.5.2 For BBA-LLB

7.5.2.1 $5.0 \leq CGPA < 5.5$ will be awarded Pass class

7.5.2.2 $5.5 \leq CGPA < 6.5$ will be awarded Second-class

7.5.2.3 $6.5 \leq CGPA < 8.0$ will be awarded First class

7.5.2.4 $CGPA \geq 8.0$ will be awarded First class with Distinction.

7.5.3 For B.Pharmacy

7.5.3.1 $5.0 \leq CGPA \leq 5.99$ will be awarded Second-class

7.5.3.2 $6.0 \leq CGPA \leq 7.49$ will be awarded First class

7.5.3.3 $CGPA \geq 7.5$ will be awarded First class with Distinction.

CHAPTER 8

8.1Attendance Rules

The following Attendance Policy for promotion of very course

S.No	Program	Minimum Attendance % Required for promotion of every course
1	All Programs except BBA-LLB	85
2	BBA-LLB	70

The Student must maintain a minimum attendance of 85% for all programs, except for BBA-LLB which is 70%, in every course. In case of medical exigencies, the student/parent should inform the Principal within a week by submitting necessary proofs and in such cases the attendance can be condoned up to an extent of 10%. by Principal on the recommendation of the Head of the Department.

1. Attendance in a course shall be counted from the date of commencement of the classwork.
2. Attendance for the students who are transferred from other institutes and for new admissions, attendance must be considered from the date of her/his admission.
3. In case of attendance falling marginally below 75% for all programs(for BBA-LLB is 65%) due to severe medical reasons or any other valid reasons, the Principal/Program chair may bring such cases, along with 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 attendance percentage requirement condition after going through case by case.

8.2Attendance based 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.

For BBA- and LLB the distribution of marks, if the attendance percentage is >76 is 1 mark, >81 is 2 marks. >86 is 3 marks,>91 is 4 marks and >96 is 5 marks, other wise 0 marks.

For all other programs the distribution of marks for attendance is [85, 88] = 1 mark, [89, 91] = 2 marks, [92, 94] =3 marks, [95, 97] =4marks and [98,100] =5marks, below 85%, even in case of condonation,"0" marks.

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

8.3 Attendance Waiver

Students maintaining a CGPA ≥ 9.00 and SGPA ≥ 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.

8.4 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 Head of the Department (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, and in Entrepreneurship related activities a maximum of 18 instructional

days per semester. This condonation is not applicable for summer term.

8.5 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. Acts of indiscipline
c. Withdrawal from a course

8.6 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 Principal 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.

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

8.6.1.1 Pre-approved participation in University/State/National/International co-curricular and extra-curricular activities

8.6.1.2 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.

8.6.1.3 Death of immediate family member

8.7 Remedial Classes:

The following categories 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
- ✓ 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 class work hours.

The following ALMs are recommended for slow learners:

- One minute paper
- Think/Plan/Share
- Role play
- Focused listening and Listening for specifics
- Just-in time teaching
- Models
- Sheets
- Hands on activity

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

CHAPTER 9

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.

9.1 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 distribution of marks for Semester-In evaluation is 60% of aggregate marks of the course for all the programs except B.Arch (50%), B.Pharmacy (25 %) & BBA-LLB (40%).

Sl No.	**College/School Name**	**Semester-In Evaluation (Weightage %) (A)**	**Sem End Examination (Weightage %) (B)**	**Minimum requirement for pass %**	
				(A+B)	**B**
1	School of Architecture (B.Arch)	**50**	**50**	**50**	**50**
2	College of Pharmacy (B.Pharm)	**25**	**75**	**50**	**50**
3	College of Law (BBA-LLB)	**40**	**60**	**40**	**40**

4	For all Others	**60**	**40**	**40**	**40**

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. 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.

g. In case a student has missed any of the two semester in evaluations, S/he is eligible for and will be provided with an opportunity of appearing for re-examination. However such a facility is applicable for only one semester in evaluation tests.

9.2 Semester End Examination

a. 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.

b. 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.

c. If a student earns F grade in any of the courses of a semester, an instant supplementary exam (for only Semester End Exam component) will be provided within one fortnight of the declaration of the results.

9.2.1 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, after getting the plagiarism certificate only will be considered and 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.

9.3 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.

9.3.1 Absolute Grading

The list of absolute grades and its connotation are given below for B.Tech ,M.Tech, M.Sc, BCA, BA, B.Sc HM, BBA, B.Com(Hon's), MBA programs

School Of Architecture (B.Arch)

Performance	Letter Grade	Grade Point	Percentage of marks
Outstanding	O	10	90 - 100
Excellent	A+	9	80 - 89
Very Good	A	8	70 - 79
Good	B+	7	60 - 69
Above Average	B	6	50 - 59
Pass	C	5	46 - 50
Fail	F	0	0 – 49
Fail	AB	0	Absent

College of Pharmacy (B.Pharm)

Performance	Letter Grade	Grade Point	Percentage of marks
Outstanding	O	10	90 – 100
Excellent	A	9	80– 89
Good	B	8	70– 79
Fair	C	7	60– 69
Average	D	6	50– 59
Fail	F	0	Less than 50
Fail	AB	0	Absent

For all other Programs

Performance	Letter Grade	Grade Point	Percentage of marks
Outstanding	O	10	90 - 100
Excellent	A+	9	80 - 89
Very Good	A	8	70 - 79
Good	B+	7	60 - 69
Above Average	B	6	50 - 59
Average	C	5	46 - 49
Pass	P	4	40 - 45
Failed	F	0	0 – 39
Absent	AB	0	Absent

9.3.2 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
P	4	μ-1.50σ <= total marks < μ-1.25σ or ≥40
F	0	total marks <μ-1.50σ or total marks <=39
Ab	0	Absent

μ is the mean mark of the class excluding the marks of those students who scored ≥ 90% and 40% after rounding the percentages to the next highest integer. σ is the standard deviation of the marks from then.Relative grading is not applicable for B.Arch & B. Pharmacy programs.

9.3.3 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'Ci' is the number of credits of the i^{th} course and *'G_i'* is the grade point scored by the student in the i^{th}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'ᵢis the SGPA of the i^{th} 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 appearing for a course having lab integrated with theory and in case obtains less than 40% in either of lab or theory component of semester end examination, and in such case the student has to reappear for the component only in which he has secured less than 40%. Till successful attainment of minimum 40% of both components, the student remains in the F grade for that course.

d. Audit/Certificate courses are graded as satisfactory (S) or non-satisfactory(NS) 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.

9.3.3.1 Illustration Of Computation Of SGPA AND CGPA

Computation of SGPA and CGPA Illustration for SGPA

COURSE	CREDITS	GRADE LETTER	GRADE POINT	CREDITPOINT (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,

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

9.4 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 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/ST-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, and any Program Degree with distinction, in case s/he takes up the betterment option.

9.5 Course Based Detention Policy

In any course, a student must maintain a minimum attendance as per the attendance policy referred in Chapter 5.1 and 5.4, to be eligible for appearing in the Sem-End examination, failing to fulfill this condition, will deem such student to be detained in that course. He/she is thereby ineligible to take semester end exam.

CHAPTER 10

PROMOTION

10.1 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. For all UG /PG remaining programs, the change of branch is not applicable.

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 within the program discipline.
b. Apart from students mentioned in clause (a) above, those who have successfully completed all the first and second semester courses and with CGPA $\geq$ 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.

10.2 Credit transfer

10.2.1 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.

10.2.2 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 an 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.

10.2.3 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 or one studio hour is equivalent to 1.5 credit during a semester.

10.3 Promotion Policy

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

Sl No	College Name	Promotion Policy – Year / Semester
1	College of Architecture (B.Arch)	A student shall not be permitted to enroll for the tenth semester Architectural Design Thesis unless he / she has successfully completed Practical Training/ Practices School / Internship.
2	College of Arts, Humanities & Sciences (BA., BCA, MA-English, M.Sc Chemistry, M.Sc Applied Mathematics, M.Sc Physics)	**For BCA,** A student is eligible for provisional promotion to a higher semester if S/he: Earns a minimum of 28 credits prior to registration of III semester. For remaining programs, Promotion Policy is Not Applicable.
3	College of Business School (BBA, B.Com (H), B.Sc HM, MBA, M.Sc (Finance & Control)	**NA**
4	College of Engineering (B.Tech, M.Tech)	For B.Tech: A student is eligible for provisional promotion to a higher semester if s/he: 1. Earns a minimum of 40 credits prior to registration of V semester 2. Earns a minimum of 70 credits prior to registration of VII semester. **Note:** In case a student is unable to secure minimum P grade for a particular course even after three consecutive attempts, s/he has to repeat the course by re-registration. For M.Tech, there is no Promotion Policy.
5	College of Fine Arts (BFA & B.Sc-VC)	**NA**

6	College of Pharmacy (B.Pharm)	1.He/she shall not be eligible to attend the courses of V semester until all the courses of I and II semesters are successfully completed. 2. He/she shall not be eligible to attend the courses of VII semester until all the courses of I, II, III and IV semesters are successfully completed. 3. A lateral entry student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of III and IV semesters are successfully completed. 4. Any student who has given more than 4 chances for successful completion of I / III semester courses and more than 3 chances for successful completion of II / IV semester courses shall be permitted to attend V / VII semester classes ONLY during the subsequent academic year as the case may be. In simpler terms there shall NOT be any ODD BATCH for any semester.
7	College of Law (BBA-LLB)	**NA**

- For other remaining programs. A student shall be eligible for provisional promotion for registration of courses in the next semester irrespective of detentions/ backlogs.

10.4 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.

10.5 Academic Counseling Board (ACB)

Academic Counseling Board is constituted by the Dean Academics, for each program separately. This board shall comprise of the respective Chairmen, Board of Studies, two Professors and two Associate Professors of the program.

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

- Secured a CGPA of less than 6.00.
- Secured 'F' grade in 3 or more 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.

10.5.1 Backlog Courses

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

10.5.2 Rustication

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

10.6 Award Of Medals

KLEF awards Gold and silver medals to the top two 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.

CHAPTER 11

STUDENT COUNSELLING

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

11.1 : 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, counseling 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.

11.2 : 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.

11.3 : 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. Counseling 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 counseling
g. Motivational lectures by eminent speakers.

Every student should approach her/his counselor, for any of his/ her requirements.

CHAPTER 12

PROGRAM STRUCTURES

KONERU LAKSHMAIAH EDUCATION FOUNDATION																			
2020-21 COURSE STRUCTURE FOR B.TECH																			
										Credits									
SNO	COURSE CODE	COURSE NAME	L	T	P	S	Cr	Pre.req	OFFERED TO	BT	CE	CS	EC	CM	EE	ME	AD	CI
I		HUMANITIES & SOCIAL SCIENCES																	
1	20UC1101	Integrated Professional English	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
2	20UC1202	English Proficiency	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
3	20UC2103	Professional Communication Skills	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
4	20UC2204	Corporate Communication Skills	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
5	20UC3005	Aptitude Builder	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
6		Foreign Language Elective	2	0	0	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
7	20UC0007	Indian Heritage and Culture	2	0	0	0	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
8	20UC0008	Indian Constitution	2	0	0	0	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
9	20UC0009	Ecology & Environment	2	0	0	0	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
10	20UC0010	Universal Human Values & Professional Ethics	2	0	0	0	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
11	20UC0011	Entrepreneurship	2	0	0	0	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
Total Credits										12	12	12	12	12	12	12	12	12

II		**BASIC SCIENCES**																	
1	20MT1101	Mathematics For Computing	2	2	0	2	4.5	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
2	20UC1102	Design Thinking And Innovation - 1	1	0	0	4	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
3	20UC1203	Design Thinking And Innovation- 2	1	0	0	4	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
4	20UC2104	User Centric Design Techniques	1	0	0	4	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
5	19BT1001	Biology For Engineers	2	0	0	0	2	NIL	CE, CS, EC, CM, EE, ME,AD, CI		2	2	2	2	2	2	2	2
6	19MT2102	Mathematics For Engineers	2	1	0	0	3	NIL	CE, CS, EC, CM, EE, ME,AD, CI		3	3	3	3	3	3	3	3
7	19CS2104	Mathematical Programming - 1	2	0	0	0	2	NIL	CS, CM,AD, CI			2		2			2	2
8	19CS2204	Mathematical Programming - 2	2	0	0	0	2	NIL	CS, CM,AD, CI			2		2			2	2
9	19MT2011	Bio Statistics	2	1	0	0	3	NIL	BT	3								
10	19MT2007	Probability And Optimization Techniques	2	1	0	0	3	NIL	CE		3							
11	19MT2001	Mathematical Methods	3	0	0	0	3	NIL	BT	3								
12	20EE2104	Mathematical transforms for Signal processing	2	1	0	0	3	NIL	EEE						3			
14	19EE2101	Electrical Circuits	3	0	2	0	4	20EE1201	EEE						4			
		SCIENCE ELECTIVE - 1							**OFFERED TO**									
1	19PH1005	Physics	3	0	2	0	4	NIL	CS, BT, CI, AD	4		4					4	4
2	19PH1004	Solid State Physics	3	0	2	0	4	NIL	EC,CM					4				
3	19PH1008	Physics For Electronics Engineering	3	0	2	0	4	NIL	EC				4					
4	19PH1006	Materials & Measurements	3	0	2	0	4		EE						4			
5	20PH1010	Mechanics	3	1	0	0	4	NIL	CE, ME		4					4		
		SCIENCE ELECTIVE - 2							**OFFERED TO**									
1	19CY1101	Engineering Chemistry	3	0	2	0	4	NIL	BT, CS, EC, CM, EE,AD, CI	4		4	4	4	4		4	4
2	19CY1003	Chemistry And Bi Informatics For Engineers	3	0	2	0	4	NIL	EC									

3	19CY1004	Organic Electronics	3	0	2	0	4	NIL	EC										
4	**19CE2205**	**Geology**	**3**	**0**	**2**	**0**	**4**	**NIL**	**CE**		**4**								
5	20PH2007	Materials for Mechanical Engineering Applications	3	0	2	0	4	NIL	ME							4			
Total Credits										24.5	26.5	27.5	23.5	27.5	30.5	23.5	27.5	27.5	
III		**ENGINEERING SCIENCES**																	
1	20SC1101	Computational Thinking For Design	3	0	2	6	5.5	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
2	20ME1103	Design Tools Workshop - I	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2	
3	19SC1202	Data Structures	3	0	2	3	4.75	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	
4	19SC1209	Design Tools Workshop - II	0	0	4	0	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2	
5	20SC2205	Design Through Visual Programming	1	0	0	4	2	NIL	BT, CS, EC, CM, EE, AD, CI	2		2	2	2	2		2	2	
6	19SC1203	Object Oriented Programming	3	0	2	3	4.75	NIL	BT, CE, CS, EC, CM, EE,AD, CI	4.75	4.75	4.75	4.75	4.75	4.75		4.75	4.75	
7	20EC1101	Digital Logic & Processors	3	0	2	0	4	NIL	AD,CS,CM,CI,EC,EE			4	4	4	4		4	4	
11	19EC1202	Computer Organization & Architecture	2	0	0	0	2	20EC1101	CS, CM, EC, EE			2	2	2	2				
8	19BT2103	Biochemical Thermodynamics	3	1	0	0	4	NIL	BT	4									
9	19BT2101	Process Engineering Principles	2	1	0	0	3	NIL	BT	3									
10	19BT2102	Transport Processes In Biological Systems	3	0	2	0	4	NIL	BT	4									
11	19EC1213	Design Basic Electonic Circuits	3	0	0	0	3	NIL	EC,CM				3	3					
12	20EE1201	Basic Electrical And Electronics Circuits	3	0	0	0	3	NIL	EE						3				
13	19EE2205	Sensors And Instrumentation	3	0	0	0	3		EE						3				
15	19EC2111	Electronic System Design Workshop	1	0	2	2	2.5	NIL	EC,CM				2.5	2.5					
16	20EC2214	IOT Workshop	1	0	0	4	2	NIL	EC				2						

17	20EC2112	IT Workshop	1	0	2	0	2	NIL	EC				2						
18	19CE1002	Engineering Graphics For Civil Engineers	0	0	2	0	1	NIL	CE		1								
19	19CE2105	AI & ML Applications In Civil Engineering	2	0	0	4	3	NIL	CE		3								
20	19CE2101	Solid Mechanics	3	0	2	0	4	NIL	CE		4								
21	19CE2102	Fluid Mechanics	3	0	2	0	4	NIL	CE		4								
22	20ME1203	Computational Thinking and Data Sciences	3	0	2	3	4.75	20SC1101	ME							4.75		
23	20ME1002	2D Modeling of Physical Systems using CAD tools	1	0	2	0	2	Nil	ME							2		
24	20ME2104	3D Modeling and Physical Prototyping of Mechanical components	0	0	4	0	2	20ME1002	ME							2		
25	20ME2209	Numerical Computation for Mechanical Engineers	2	0	2	0	3	Nil	ME							3		
26	20EE2205	Circuits and Electronics	3	0	2	0	4	Nil	ME							4		
27	20ME2105	Thermodynamics	3	0	0	0	3	Nil	ME							3		
Total Credits										32	31	27	36.5	32.5	33	33	25	25
		PROFESSIONAL CORE COURSES																
1	19BT1201	Cell Biology	3	1	0	0	4	NIL	BT	4								
2	19BT2105	Biochemistry	3	0	2	0	4	NIL	BT	4								
3	19BT2108	Molicular Biology	3	1	0	0	4	NIL	BT	4								
4	19BT2109	Immunology	3	0	2	0	4	NIL	BT	4								
5	19BT3110	Bioinformatics	3	0	2	0	4	NIL	BT	4								
6	19BT3111	Genetic Engineering	3	0	2	0	4	NIL	BT	4								
7	19BT3112	Fermentation Technology	3	0	2	0	4	NIL	BT	4								
8	19BT3113	Biochemical Reaction Engineering	3	0	2	0	4	NIL	BT	4								
9	19BT3201	Plant Biotechnology	3	0	2	0	4	NIL	BT	4								
10	19BT3202	Downstream Processing	3	0	2	0	4	NIL	BT	4								
12	19EC2103	Analog Electronic Circuit Design	3	0	2	2	4.5	NIL	EC, CM,EE				4.5	4.5	4.5			

13	19EC2104	Communication Signals & System Design	3	1	0	0	4	NIL	EC				4					
14	19EC2207	Electromagnetic Fields & Applications	3	1	0	0	4	NIL	EC				4					
15	19EC2106	Embedded Controllers	2	0	3	2	4	NIL	EC, EE				4		4			
16	20CM2001	Embedded Controllers & Arm	3	0	2	4	5	NIL	CM					5				
17	19EC2105	Analog And Digital Communication	3	0	3	0	4.5	NIL	EC				4.5					
18	19EC2208	Digital Signal Processing	3	0	2	0	4	NIL	EC				4					
19	20EC2209A	Statistics, Ai, Ann	3	0	0	2	3.5	NIL	EC				3.5					
20	19EC2210	Data Networks And Protocols	3	0	2	0	4	NIL	EC				4					
21	20EC2209	Ai, Ann Tools & Applications	3	0	0	0	3	NIL	EC				0					
22	20CS2201	Design Of Algorithms	3	0	2	4	5		CS,AD,CI			5					5	5
23	20CS2102	Web Engineering	3	0	2	4	5		CS,AD,CI, CM			5		5			5	5
24	20CS2103	Operating System Design	3	0	2	4	5		CS,CI, CM			5		5				5
26	20CS2104	Database System Design	3	0	2	0	4		CS,CI, CM			4		4				4
27	20CI2101	Computer Networks	3	0	2	0	4		CI, CM					4				4
28	20CI2202	Cloud Networking And Administration	3	0	2	0	4		CI									4
29	20CS2205	Elements Of Software Construction	3	0	2	0	4		CS,CI, CM			4		4				4
30	20CI2203	Information Assurance & Security	3	0	2	4	5		CI									5
31	20CS2106	Artificial Intelligence	3	0	2	0	4		CS,CM			4		4				
32	20CS2207	Cloud Computing	3	0	2	0	4		CS			4						
33	20AD2103	Data Science & Visualization	3	0	2	0	4		AD								4	
34	20AD1201	Introduction To Artificial Intelligence	2	1	0	0	3		AD								3	
35	20AD2102	Machine Learning	3	0	2	4	5		AD								5	

36	20AD2104	Computer Vision & Perception	3	0	2	0	4		AD								4	
37	20AD2207	Deep Learning	3	0	2	0	4		AD								4	
38	20AD2205	Data Warehousing & Mining	3	0	2	0	4		AD								4	
39	20AD2206	Big Data Engineering	3	0	2	4	5		AD								5	
40	19CE2103	Surveying	3	0	2	0	4	NIL	CE		4							
41	19CE2104	Construction Materials & Concrete Technology	3	0	2	0	4	NIL	CE		4							
42	19CE2101	Structural Analysis	3	1	0	0	4	NIL	CE		4							
43	19CE2201	Building Planning, Drawing & Construction Management	3	0	2	0	4	NIL	CE		4							
44	19CE2202	Hydraulic Engineering	3	0	2	0	4	NIL	CE		4							
45	19CE2203	Environmental Engineering	3	0	2	0	4	NIL	CE		4							
46	19CE3101	Design Of Reinforced Concrete Structures	3	0	2	0	4	19CE2201	CE		4							
47	19CE3103	Transportation Engineering	3	0	2	0	4	NIL	CE		4							
48	19CE2205	Geotechnical Engineering	3	0	2	0	4	NIL	CE		4							
49	19CE3201	Quantity Surveying Estimation	3	0	2	0	4	NIL	CE		4							
50	19CE3102	Water Resources Engineering	3	1	0	0	4	NIL	CE		4							
51	19CE3203	Design of steel Structures	3	1	0	0	4	19CE2201	CE		4							
52	19EE2102	Electrical Power Engineering	3	1	0	0	4	NIL	EE						4			
53	19EE2103	Electrical Machines	3	0	2	2	4.5	NIL	EE						4.5			
54	19EE2201	Industrial Applications of Electrical Machines	3	0	2	0	4	19EE2103	EE						4			
55	19EE2202	Power Electronics	3	0	2	2	4.5	20EE1201	EE						4.5			
56	19EE2203	Computer Applications in Power Systems	3	0	2	0	4	19EE2102	EE						4			
57	19EE2204	Control Systems	3	0	2	2	4.5	NIL	EE						4.5			

58	20ME2212	Engineering in the Physical World	1	0	0	4	2	20ME2105	ME							2		
59	20ME2101	Mechanics of Solids	3	0	2	0	4	20PH1010	ME							4		
60	20ME2106	Fluid Mechanics & Hydraulic Machines	3	0	2	0	4	Nil	ME							4		
61	20ME2107	Manufacturing Techniques	3	0	2	0	4	Nil	ME							4		
62	20ME2208	Mechanical Engineering Design	3	0	2	4	5	20ME2101	ME							5		
63	20ME2210	Analysis of Thermal Systems	3	1	0	4	5	20ME2105	ME							5		
64	20ME2211	Analysis of Mechanisms and Machines	3	0	2	0	4	20PH1010	ME							4		
65	20ME3113	Machine Design & Innovation	3	1	0	4	5	20ME2208	ME							5		
66	20ME3114	Industry 4.0 & Design of Cyber Physical Systems	3	0	0	4	4	Nil	ME							4		
67	20ME3115	Heat Transfer	3	0	2	0	4	Nil	ME							4		
68	20ME3216	Artificial Intelligence & Data Analytics	3	0	2	0	4	Nil	ME							4		
Total Credits										40	48	31	32.5	35.5	34	45	39	36
SKILLING COURSES																		
1	20TS3101	Technical Proficiency / Entrepreneurial Incubation	0	0	0	1 2	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
2	20TS3202	Technical Proficiency / Technopreneurship	0	0	0	1 2	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
3	20TS4103	Technical Proficiency / Entrepreneural Skilling	0	0	0	1 2	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
4	20TS4204	Technical Proficiency / Entrepreneural Skilling	0	0	0	1 2	0	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	0	0	0	0	0	0	0	0	0
Total Credits										6	6	6	6	6	6	6	6	6
PROJECT																		
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**Cr**		**OFFERED TO**									
1	20IE2050	Social Internship	0	0	0	8	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
2	20IE3050	Technical Internship	0	0	0	8	2	NIL	BT, CE, CS, EC, CM,	2	2	2	2	2	2	2	2	2

									EE, ME,AD, CI										
3		Design Studio Elective	0	0	0	10	2.5	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
4	20IE3150	Midgrade Capstone Project 1	0	0	0	8	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
5	20IE3250	Midgrade Capstone Project 2	0	0	0	8	2	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
6	20IE4150	Capstone Project 1	0	0	0	24	6	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	6	6	6	6	6	6	6	6	6
7	20IE4250	Capstone Project 2	0	0	0	24	6	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	6	6	6	6	6	6	6	6	6
8	19IE4050	Practice School	0	0	0	24	6	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	6	6	6	6	6	6	6	6	6
9	19IE4051	Internship	0	0	0	24	6	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	6	6	6	6	6	6	6	6	6
Total Credits										22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FLEXI-CORE																		
1	FC-1	Flexi-Core-1	**3**	**0**	**2**	0	4		BT, CS, EC, CM, EE, ME,AD, CI	4	0	4	4	4	4	4	4	4
2	FC-2	Flexi-Core-2	2	0	2	8	4		BT, CS, EC, CM, EE,AD, CI	4	0	4	4	4	4	0	4	4
3	FC-3	Flexi-Core-3	3	0	0	4	4		CS, EC, AD, CI	0	0	4	4	0	0	0	4	4
Total Credits										8	0	12	12	8	8	4	12	12
PROFESSIONAL ELECTIVES																		
1	PE-1	Professional Elective-1	**2**	**0**	**0**	4	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
2	PE-2	Professional Elective-2	**1**	**0**	**2**	4	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
3	PE-3	Professional Elective-3	**3**	**0**	**0**	0	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
4	PE-4	Professional Elective-4	**0**	**0**	**0**	12	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
5	PE-5	Professional Elective-5	**1**	**0**	**0**	8	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
6	PE-6	Professional Elective-6	2	0	2	0	3		EC	0	0	0	3	0	0	0	0	0
Total Credits										15	15	15	18	15	15	15	15	15

OPEN ELECTIVES																				
1		Open Elective -1	3	0	0	0	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
2		Open Elective -2	3	0	0	0	3		BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
3	20MB4051	Open Elective -3 (Modeling Business Systems)	2	0	0	0	2		BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
4	20MB4052	Open Elective -4 (Entrepreneurship Essentials)	2	0	0	0	2		BT, CE, CS, EC, CM, EE, ME,AD, CI	2	2	2	2	2	2	2	2	2
Total Credits										10	10	10	10	10	10	10	10	10
Grand Total Credits										**170**	**171**	**163**	**173**	**169**	**171**	**171**	**169**	**166**

FLEXI CORE COURSES									
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**Cr**	**Pre requisites**	**OFFERED TO**
1	19BT2106	Microbiology	3	1	0	0	4	NIL	BT
2	20BT2110	Medical Lab Technology	3	0	2	0	4	NIL	BT
3	20BT2111	Advanced Instrumenttion	3	0	0	4	4	NIL	BT
4	19BT2107	Bioanalytical Techniques	2	0	2	4	4	NIL	BT
5	20BT2112	Animal Cell Culture	3	0	2	0	4	NIL	BT
6	20BT2113	Process Engineering Tools	4	0	0	0	4	NIL	BT
10	20CS3076	Distributed &Cloud Computing	3	0	0	4	4	NIL	CS,AD
11	20CS3075	Digital Forensics	2	0	2	4	4	NIL	CS,AD,CI
12	20CS3073	Continuous Delivery & Devops	3	0	2	0	4	NIL	CS,AD,CI
13	20CS3074	Visual Programming And HCI (UI/UX)	4	0	0	0	4	NIL	CS,AD,CI
14	20AD3081	Neuro-Fuzzy Computing	2	0	0	8	4	NIL	AD
15	20AD3082	Streaming Analytics	3	1	0	0	4	NIL	AD
16	20AD3083	Graph & Web Analytics	3	0	2	0	4	NIL	AD
17	20AD3084	Natural Language Processing	3	0	0	4	4	NIL	AD
18	20CS3078	Computational Modelling	2	0	2	4	4	NIL	CS,AD
19	20CS3071	Machine Learning	3	0	2	0	4	NIL	CS,CI

20	20CS3072	Big Data Analytics	4	0	0	0	4	NIL	CS,CI
21	20CI3085	Game Development Through C# Programming	2	0	0	8	4	NIL	CI
22	20CI3086	Computer Vision & Perception	3	1	0	0	4	NIL	CI
23	20CI3087	Management Information Systems	3	0	2	0	4	NIL	CI
24	20CS3077	Automata Theory & Compiler Design	3	0	0	4	4	NIL	CS
25	19EC3015	Vlsi Design	2	0	2	4	4	NIL	EC,CM
26	19EC3016	Wireless Communications	3	0	2	0	4	NIL	EC
27	19EC3017	Rf System Design	4	0	0	0	4	NIL	EC
28	19EC3018	Biomedical Electronics & Iot For Healthcare	2	0	0	8	4	NIL	EC
29	19EC3019	Electronics Instruments & Automation	3	1	0	0	4	NIL	EC
30	19EC3020	System Engineering, Operation Research & Designing	3	0	2	0	4	NIL	EC
31	19EC3021	Electrical Technologies & Solar Power Systems	3	0	0	4	4	NIL	EC
32	19EC3022	Ai, Ann, Fuzzy Logic & Genetic Algorithms)	2	0	2	4	4	NIL	EC
33	19EM5201	Embedded System Design With Arm	3	0	2	0	4	19CS1205	EC
34	19EM5101	Fundamentals Of Internet Of Things	4	0	0	0	4	19CS1205	EC,EE
35	19EM5104	Web Intelligence	2	0	0	8	4	19SC1203	EC,EE
36	19CS3021	Machine Learning	3	1	0	0	4	19CS2212	EC
37	19CS3040	Crypt Analysis And Cyber Defence	3	0	2	0	4	19CS2109	EC
38	19EC2208	Vlsi Design	3	0	0	4	4	NIL	EC
39	19CS3050R	Data Warehousing & Mining (Regular)	2	0	2	4	4	19ES2204	CM
40	19CS3050A	Data Warehousing & Mining (Advanced)	3	0	2	0	4	19ES2204	CM
41	19CS3060R	Docker Devops (Regular)	4	0	0	0	4	NIL	CM
42	19CS3060A	Docker Devops (Advanced)	2	0	0	8	4	NIL	CM
43	19EC3071	Control Systems & Introduction To Robotics	3	1	0	0	4	NIL	CM
44	19EC3101	Tcp/Ip Protocol Suite	3	0	2	0	4	NIL	CM
45	19EE3101	Ai Techniques In Electrical Engineering	3	1	0	0	4	Nil	EE
46	19EE3104	Utilisation Of Electrical Energy	3	1	0	0	4	Nil	EE
47	19EE3103	Restructered Power Systems	3	1	0	0	4	Nil	EE
48	19ME3116	Robotics & Artificial Intelligence	3	0	2	0	4	Nil	EE
49	19CS2108	Data Base Management Systems	3	0	2	0	4	19SC1202	EE
50	19CS2109	Computer Networks & Security	3	1	0	0	4	Nil	EE

51	20EE3201	Custom Power Devices	3	1	0	0	4	Nil	EE
52	19EC3109	Data Networks And Protocols	3	1	0	0	4	Nil	EE
53	19EC3016	Wireless Communications	3	1	0	0	4	Nil	EE
54	19ME4102	Data Analysis	3	0	2	0	4	Nil	EE
55	19CS2212	Artificial Intelligence	3	0	2	0	4	Nil	EE
56	19CS2211	Software Engineering	3	1	0	0	4	Nil	EE
57	19CS2204	Mathematical Programming- 2	2	0	0	0	2	NIL	EE
58	20ME3221	OOPS Through Java	3	0	0	4	4	Nil	ME
59	20ME3222	R-Programming	2	0	2	4	4	Nil	ME
60	20ME3223	Python Programming	3	0	2	0	4	Nil	ME
61	20ME3225	Machine Learning	2	0	0	8	4	Nil	ME

LIST OF SPECIALIZATIOS AND PROFESSIONAL ELECTIVES									
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**	**PreRequisite**	**OFFERED TO**
GENETIC ENGINEERING									
1	19BT3252	Transgenic Technology	3	0	0	0	3	19BT3111	BT
	19BT3253	Molecular Expression Technology	3	0	0	0	3	19BT3111	BT
	19BT3254	Genomics And Proteomics	3	0	0	0	3	19BT3111	BT
	19BT4150	Molecular Markers And Diagnostics	3	0	0	0	3	19BT3111	BT
	19BT4151	Gene And The Environment	3	0	0	0	3	19BT3111	BT
	19BT4152	Microbial Genetics	3	0	0	0	3	19BT3111	BT
	19BT4153	Dna Forensics	3	0	0	0	3	19BT3111	BT
INDUSTRIAL BIOTECHNOLOGY									
2	19BT3256	Pharmaceutical Biotechnology	3	0	0	0	3	19BT2106	BT
	19BT3257	Metabolic Engineering	3	0	0	0	3	19BT2106	BT
	19BT3258	Bioresource Technology	3	0	0	0	3	19BT2106	BT
	19BT4154	Bioprocess Economics And Plant Design	3	0	0	0	3	19BT2106	BT
	19BT4155	Enzyme Engineering	3	0	0	0	3	19BT2106	BT
	19BT4156	Bioprocess Validation And Cgmp	3	0	0	0	3	19BT2106	BT

	19BT4157	Food Technology	3	0	0	0	3	19BT2106	BT
	19BT4158	Pharmacovigilance And Safety	3	0	0	0	3	19BT2106	BT
Bioinformatics									
3	19BT3259	Perl And Bioperl Programming	3	0	0	0	3	19BT3110	BT
	19BT3260	Biomedical Informatics	3	0	0	0	3	19BT3110	BT
	19BT3261	Molecular Modelling And Drug Design	3	0	0	0	3	19BT3110	BT
	19BT3262	Structural Biology	3	0	0	0	3	19BT3110	BT
	19BT4160	Applied Bioinformatics	3	0	0	0	3	19BT3110	BT
	19BT4161	Python And R Programming	3	0	0	0	3	19BT3110	BT
	19BT4162	Data Base Management System	3	0	0	0	3	19BT3110	BT
Medical Biotechnology									
4	19BT3263	Stem Cell Technology	3	0	0	0	3	19BT2015	BT
	19BT3265	Cancer Biology	3	0	0	0	3	19BT2015	BT
	19BT3266	Neurobiology	3	0	0	0	3	19BT2015	BT
	19BT4163	Bioelectronics & Biosensors	3	0	0	0	3	19BT2015	BT
	19BT4164	Tissue Engineering	3	0	0	0	3	19BT2015	BT
	19BT4165	Virology	3	0	0	0	3	19BT2015	BT
	19BT4166	Nanobiotechnology	3	0	0	0	3	19BT2015	BT
Structural Engineering									
5	19CE3211	Advanced Structural Analysis	3	0	0	0	3	NIL	CE
	19CE3221	Advanced Design of Reinforced Concrete Structures	3	0	0	0	3	NIL	CE
	19CE3231	Prestressed concrete	3	0	0	0	3	NIL	CE
	19CE4141	Bridge engineering	3	0	0	0	3	NIL	CE
	19CE4151	Sustainable construction technologies	3	0	0	0	3	NIL	CE
Geotechnical Engineering									
6	19CE3212	Foundation engineering	3	0	0	0	3	NIL	CE
	19CE3222	Ground improvement techniques	3	0	0	0	3	NIL	CE
	19CE3232	Design of earth retaining structures	3	0	0	0	3	NIL	CE
	19CE4142	Geotechnical earthquake engineering	3	0	0	0	3	NIL	CE
	19CE4152	Rock mechanics	3	0	0	0	3	NIL	CE

Water & Environmental Engineering									
7	19CE3213	Sustainable engineering & technology	3	0	0	0	3	NIL	CE
	19CE3223	Environmental impact assessment and life cycle analyses	3	0	0	0	3	NIL	CE
	19CE3233	Solid and hazardous waste management	3	0	0	0	3	NIL	CE
	19CE3214	River engineering	3	0	0	0	3	NIL	CE
	19CE3224	Urban water hydrology and hydraulics	3	0	0	0	3	NIL	CE
Construction Technology & Management									
8	19CE3216	CONSTRUCTION CONTRACTS	3	0	0	0	3	NIL	CE
	19CE3226	RESOURCE SAFETY AND QUALITY MANAGEMENT	3	0	0	0	3	NIL	CE
	19CE3236	FORM WORK	3	0	0	0	3	NIL	CE
	19CE4146	ENGINEERING ECONOMY	3	0	0	0	3	NIL	CE
	19CE4156	ADVANCED CONSTRUCTION TECHNOLOGY	3	0	0	0	3	NIL	CE
TRANSPORTATION ENGINEERING									
9	19CE3215	Intelligent transportation systems	3	0	0	0	3	NIL	CE
	19CE3225	Pavement materials &design	3	0	0	0	3	NIL	CE
	19CE3235	Traffic engineering and management	3	0	0	0	3	NIL	CE
	19CE4145	Urban transportation planning.	3	0	0	0	3	NIL	CE
	19CE4155	Railway engineering airport planning and design	3	0	0	0	3	NIL	CE
ARTIFICIAL INTELLIGENCE & MACHINE LEARNING									
10	19CS3022R	Deep Learning (Regular)	1	0	2	4	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3022A	Deep Learning (Advanced)	1	0	2	4	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3023	Cognitive Computing	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3024	Pattern Recognition	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3025	Intelligent Process Automation	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI

	19CS3026R	Computer Vision(Regular)	2	0	2	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3026A	Computer Vision(Advanced)	2	0	2	4	4	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3027	Reinforcement Learning	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3028	Soft Computing	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3029R	Natural Language Processing(Regular)	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3029A	Natural Language Processing(Advanced)	3	0	0	0	3	19CS2212	EE, CS,EM, ME,AD,CI
	19CS3051	Machine Learning	2	0	2	0	3	19CS2212	EE, CS,EM, ME,AD,CI
Cloud & Edge Computing									
11	19CS3030	Distributed File System	2	0	2	0	3	19CS2210	CS,EM, AD,CI
	19CS3031	Edge Computing	3	0	0	0	3	19CS2210	CS,EM, AD,CI
	19CS3032	High Performance Computing	2	0	2	0	3	19CS2210	CS,EM, AD,CI
	19CS3033	Advanced Computer Architecture	2	0	2	0	3	19CS1205	CS,EM, AD,CI
	19CS3034	Cloud Computing	2	0	2	0	3	19CS2210	CS,EM, AD,CI
	19CS3035R	Cloud Networking (Regular)	1	0	2	4	3	19CS2210	CS,EM, AD,CI
	19CS3035A	Cloud Networking (Advanced)	2	0	0	4	3	19CS3034	CS,EM, AD,CI
	19CS3036R	Cloud System And Infrastructure (Regular)	2	0	2	0	3	19CS3034	CS,EM, AD,CI
	19CS3036A	Cloud System And Infrastructure (Advanced)	2	0	0	4	3	19CS3034	CS,EM, AD,CI
	19CS3037	Fog Computing	2	0	2	0	3	19CS3034	CS,EM, AD,CI
	19CS3038	Parallel Computing	3	0	0	0	3	19CS2106	CS,EM, AD,CI
Network Security									
12	19CS3041	Digital Forensics	2	0	0	4	3	19CS2109	CS,EC,EE,EM, AD,CI
	19CS3042R	Database Security (Regular)	2	0	2	0	3	19CS2108	CS,EC,EE,EM, AD,CI
	19CS3042A	Database Security (Advanced)	2	0	0	4	3	19CS2108	CS,EC,EE,EM, AD,CI
	19CS3043	Secure Software Engineering	3	0	0	0	3	19CS2211	CS,EC,EE,EM, AD,CI

	19CS3044	System Security	2	0	2	0	3	19CS2109	CS,EC,EE,EM, AD,CI
	19CS3045	Security Policy And Governance	3	0	0	0	3	19CS2109	CS,EC,EE,EM, AD,CI
	19CS3046R	Network Security (Regular)	2	0	2	0	3	19CS2109	CS,EC,EE,EM, AD,CI
	19CS3046A	Network Security (Advanced)	2	0	0	4	3	19CS2109	CS,EC,EE,EM, AD,CI
	19CS3047R	Blockchain And Cryptocurrency (Regular)	2	0	2	0	3	19CS3040	CS,EC,EE,EM, AD,CI
	19CS3047A	Blockchain And Cryptocurrency (Advanced)	1	0	2	4	3	19CS3040	CS,EC,EE,EM, AD,CI
	19CS3048	Defensive Programming	2	0	2	0	3	19CS2108	CS,EC,EE,EM, AD,CI
Data Science And Big Data Analytics									
13	19CS3051R	Big Data Optimization (Regular)	3	0	0	0	3	NIL	CS,EC,EM,AD, CI,EE
	19CS3051A	Big Data Optimization (Advanced)	2	0	2	0	3	NIL	CS,EC,EM,AD, CI,EE
	19CS3052	Graph & Web Analytics	3	0	0	0	3	NIL	CS,EC,EM,AD, CI,EE
	19CS3053	Spatial Data Science	2	0	2	0	3	19ES2204	CS,EC,EM,AD, CI,EE
	19CS3054	Information Storage And Retrieval	2	0	2	0	3	19CS2108	CS,EC,EM,AD,CI ,EE
	19CS3055R	Big Data Analytics (Regular)	1	0	2	4	3	19ES2204 19SC1203	CS,EC,EM,AD, CI,EE
	19CS3055A	Big Data Analytics (Advanced)	1	0	2	4	3	19ES2204 19SC1203	CS,EC,EM, AD,CI,EE
	19CS3056	Advanced Databases	2	0	2	0	3	NIL	CS,EC,EM, AD,CI,EE
	19CS3057	Data Modelling And Visualization	2	0	2	0	3	19ES2204	CS,EC,EM, AD,CI,EE
Software Modelling & Devops									
14	19CS3061	Formal Methods & Requirements Engineering	2	0	2	0	3	19CS2211	CS,EM, AD,CI
	19CS3062	Software Architecture & Design	2	0	2	0	3	19CS2211	CS,EM, AD,CI
	19CS3063	Ui & Ux Design	2	0	2	0	3	19CS2211	CS,EM, AD,CI

	19CS3064	Design Patterns	2	0	0	4	3	19SC1203	CS,EM, AD,CI
	19CS3065	Software Project Management	2	0	2	0	3	19CS2211	CS,EM, AD,CI
	19CS3066	Software Fault Tolerance & Reliability	2	0	2	0	3	19CS2211	CS,EM, AD,CI
	19CS3067R	Full Stack Web Development (Regular)	1	0	2	4	3	19SC1203	CS,EM, AD,CI
	19CS3067A	Full Stack Web Development (Advanced)	2	0	0	4	3	19SC1203	CS,EM, AD,CI
	19CS3068R	Software Verification And Validation (Regular)	2	0	2	0	3	NIL	CS,EM, AD,CI
	19CS3068A	Software Verification And Validation (Advanced)	2	0	0	4	3	NIL	CS,EM, AD,CI
IOT									
15	Module-1	Programming Technologies-C & Data Structure,Python	3	0	0	0	3	NIL	CS, EC, AD, ME, CM,CI
	Module-2	Introduction to IOT & IOT Platforms	3	0	0	0	3	NIL	CS, EC, AD, ME, CM,CI
	Module-3	Networking and Wirteless Technologies	3	0	0	0	3	NIL	CS, EC, AD, ME, CM,CI
	Module-4	IoT Protocols	3	0	0	0	3	NIL	CS, EC, AD, ME, CM,CI
	Module-5	Edge ,Cloud Computing and Analytics	3	0	0	0	3	NIL	CS, EC, AD, ME, CM,CI
	19EM5107	Iot Sensing And Actuating Devices	2	0	2	0	3	NIL	CS, EC, AD, ME, CM,CI
	19EM5108	Internet Of Things: Architectures And Protocols	2	0	2	0	3	NIL	CS, EC, AD, ME, CM,CI
	19EM5109	Wireless Sensor Network	2	0	2	0	3	NIL	CS, EC, AD, ME, CM,CI
	19EM5214	Security In Internet Of Things	2	0	2	0	3	NIL	CS, EC, AD, ME, CM,CI
	19EM5215	Cloud Computing And Big Data Analytics	2	0	2	0	3	NIL	CS, EC, AD, ME, CM,CI
VlSI									
	20EC3061	Low Power VLSI	3	0	0	0	3	NIL	EC,EE, ME
	20EC3062	Algorithms for VLSI Design Automation	3	0	0	0	3	NIL	EC,EE, ME

16	20EC3063	ASIC & FPGA Chip Design	3	0	0	0	3	NIL	EC,EE, ME
	20EC3064	VLSI Sub-system Design and Design for Testability	3	0	0	0	3	NIL	EC,EE, ME
	20EC3065	Semiconductor Memories & MEMS	3	0	0	0	3	NIL	EC,EE, ME
	20EC3066	Analog & Digital IC Applications	3	0	0	0	3	NIL	EC,EE, ME
Renewable energy & Smart cities									
17	20EC3051	Wireless sensor Networks & IOT Applications	3	0	0	0	3	NIL	EC,ME,CE,EE
	20EC3052	Solar Photo-Voltaic cells & Solar Power Arrays	3	0	0	0	3	NIL	EC,ME,CE,EE
	20EC3053	Electronic Systems for Renewable Energy & Smart Grid	3	0	0	0	3	NIL	EC,ME,CE,EE
	20EC3054	IOT Applications & Smart Cities	3	0	0	0	3	NIL	EC,ME,CE,EE
	20EC3055	Systems for Smart Cities & Smart Villages	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4151	Renewable Energy Resources & Energy Management Systems	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4152	Solar PV & Thermal Applications	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4153	Wind & Micro Energy Systems	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4154	Smart Transportation & Smart Buildings	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4155	Smart Grids	3	0	0	0	3	NIL	EC,ME,CE,EE
	19EE4156	Smart City Management	3	0	0	0	3	NIL	EC,ME,CE,EE

Signal Processing									
18	20EC3081	Speech Signal Processing	3	0	0	0	3	NIL	EC
	20EC3082	Digital Image Processing	3	0	0	0	3	NIL	EC
	20EC3083	Bio Medical Image Analysis	3	0	0	0	3	NIL	EC
	20EC3084	Statistical Signal Processing	3	0	0	0	3	NIL	EC
	20EC3085	Adaptive Signal Processing	3	0	0	0	3	NIL	EC
	20EC3086	Detection and Estimation of Signals	3	0	0	0	3	NIL	EC
	20EC3087	Bio Medical Signal Analysis	3	0	0	0	3	NIL	EC

Robotics & Automation									
19	20EC3071	Control Systems & Introduction to Robotics	3	0	0	0	3	NIL	EC,ME,EE
	20EC3072	Autonomous Vehicles & Automotive Electronics	3	0	0	0	3	NIL	EC,ME,EE
	20EC3073	Advanced Robotics	3	0	0	0	3	NIL	EC,ME,EE
	20EC3074	Computer Vision & Applications	3	0	0	0	3	NIL	EC,ME,EE
	20EC3075	Human Machine Interface & Brain Machine Interface	3	0	0	0	3	NIL	EC,ME,EE
	20EC3076	Designing Automation Systems & Assistive Robotic Systems	3	0	0	0	3	NIL	EC,ME,EE
Bio-Medical Instrumentation									
20	20EC3081	Automated Vehicles & Avionics	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC3082	Calibrations and Designing Advanced Instruments	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC3083	Biological & Cyber-Physical Systems	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC3084	Electronic Instruments & Biomedical Applications	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC3085	Electronic Instrumentation &Automation	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC3086	Automated Vehicles & Avionics	3	0	0	0	3	NIL	EC,EE,CM,ME
Rf & Microwave									
21	20EC3091	Microwave Engineering	3	0	0	0	3	NIL	EC
	20EC3092	Antenna Design & Wave Propagation	3	0	0	0	3	NIL	EC
	20EC3093	Radar Engineering & Navigational Aids	3	0	0	0	3	NIL	EC
	20EC3094	Modern Antennas, Millimeter Waves & Applications	3	0	0	0	3	NIL	EC
	20EC3095	Electronic Warfare, EMI & EMC	3	0	0	0	3	NIL	EC
Data Communication									
22	20EC4051	Information Theory & Coding	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4052	4G Wireless Technologies & Cellular Communications	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4053	Satellite Communications	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4054	Optical Communication & Network	3	0	0	0	3	NIL	EC,EE,CM,ME

	20EC4055	Next Generation Wireless Technologies (WCDMA, GPRS, GSM, UMTS)	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4061	TCP/IP & Other Protocol Suite	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4062	VoIP Systems & Broad Band Networks	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4063	5G Mobile, Wireless Technologies & IEEE 802 Standards	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4064	Cloud-Computing & Network Security	3	0	0	0	3	NIL	EC,EE,CM,ME
	20EC4065	IP Multimedia Sub-System & Emerging Technologies	3	0	0	0	3	NIL	EC,EE,CM,ME
Web Technologies									
23	19EM5105	Web Programming With Python And Django	2	0	2	0	3	19SC1203	CS,CM,CI,AD
	19EM5106	Fundamentals Of Angularjs	2	0	2	0	3	NIL	CS,CM,CI,AD
	19EM5213	Fundamentals Of Mongodb	2	0	2	0	3	NIL	CS,CM,CI,AD
	19EM5211	Web Services	2	0	2	0	3	NIL	CS,CM,CI,AD
	19EM5216	Big Data Analytics	2	0	2	0	3	NIL	CS,CM,CI,AD
Industrial Automation									
25	19EE3111	Industrial Communication Protocals & Cyber Security	3	0	0	0	3	NIL	EE,ME
	19EE3112	Industrial Process Control & Automation	3	0	0	0	3	NIL	EE,ME
	19EE3113	Scada And Dcs	3	0	0	0	3	NIL	EE,ME
	19EE3114	Industrial Drives And Control	3	0	0	0	3	19EE2202	EE,ME
	19EE3115	Iot For Industrial Automation	3	0	0	0	3	NIL	EE,ME
Green Energy Technologies									
26	19EE3121	Solar Pv And Thermal Technologies	3	0	0	0	3	NIL	EC,CM,EE, ME
	19EE3122	Wind & Micro Energy Sources	3	0	0	0	3	NIL	EC,CM,EE, ME
	19EE3123	Energy Conservation & Audit	3	0	0	0	3	NIL	EC,CM,EE, ME
	19EE3124	Energy Storage Systems	3	0	0	0	3	19EE3121	EC,CM,EE, ME

	19EE3125	Energy Management Systems	3	0	0	0	3	19EE3123	EC,CM,EE, ME
Smart Grid Technologies									
27	19EE3131	Smart Grid Communication & Cyber Security	3	0	0	0	3	NIL	EC,CM,EE
	19EE3132	Smart Distribution Systems	3	0	0	0	3	19EE2102	EC,CM,EE
	19EE3133	Distributed Energy Resources	3	0	0	0	3	NIL	EC,CM,EE
	19EE3134	Smart Meters And Smart Cities	3	0	0	0	3	NIL	EC,CM,EE
	19EE3135	Wide Area Monitoring & Control	3	0	0	0	3	19EE3133	EC,CM,EE
Electric Vehicle Technologies									
28	19EE3141	Introduction To Electric Vehicles	3	0	0	0	3	NIL	EE, ME,EC
	19EE3142	Batery Management System For Electric Vehicles	3	0	0	0	3	NIL	EE, ME,EC
	19EE3143	Charging Station For Electric Vehicles	3	0	0	0	3	19EE2202	EE, ME,EC
	19EE3144	Fault Diagnosis For Electric Vehicles	3	0	0	0	3	19EE3141	EE, ME,EC
	19EE3145	Practical Aspects Of Electric Vehicles	3	0	0	0	3	NIL	EE, ME,EC
Engineering Design									
29	20ME4051	THEORY OF ELASTICITY AND PLASTICITY	3	0	0	0	3	20ME2208	ME
	20ME4052	DYNAMICS OF MULTI BODY SYSTEMS	2	0	2	0	3	20PH1010	ME
	20ME4053	MODELING ANALYSIS & DESIGN OF ROBOTIC SYSTEMS	2	0	2	0	3	NIL	ME
	20ME4054	CREEP, FATIGUE AND FRACTURE MECHANICS	3	0	0	0	3	20ME2208	ME
	20ME4055	ADVANCED STRENGTH OF MATERIALS	2	0	2	0	3	20ME2101	ME
	20ME4056	MECHANICS OF COMPOSITES	2	0	2	0	3	20ME2208	ME
	20ME4057	SUSTAINABLE DESIGN & SOCIAL INNOVATION IN ENGINEERING DESIGN	1	0	4	0	3	20ME2208	ME
Smart Manufacturing									
30	20ME4061	MODERN MANUFACTURING PROCESSES	2	0	2	0	3	20ME2107	ME
	20ME4062	ADDITIVE MANUFACTURING	2	0	2	0	3	NIL	ME
	20ME4063	ADVANCED MATERIALS	3	0	0	0	3	NIL	ME
	20ME4064	FLEXIBLE MANUFACTURING SYSTEMS	2	0	2	0	3	NIL	ME
	20ME4065	ROBOTICS & INDUSTRIAL AUTOMATION	2	0	2	0	3	NIL	ME
	20ME4066	REVERSE ENGINEERING	3	0	0	0	3	NIL	ME
	20ME4067	SUSTAINABLE DESIGN & SOCIAL	1	0	4	0	3	NIL	ME

		INNOVATION IN SMART MANUFACTURING							
Automobile Engineering									
31	20ME4071	AUTOMOBILE ENGINEERING	2	0	2	0	3	NIL	ME
	20ME4072	HYBRID & ELECTRIC VEHICLE DESIGN	2	0	2	0	3	NIL	ME
	20ME4073	AUTOTRONICS & SAFETY	2	0	2	0	3	NIL	ME
	20ME4074	ROBOTICS & INDUSTRIAL AUTOMATION	2	0	2	0	3	NIL	ME
	20ME4075	AUTOMOTIVE ELECTRICAL AND ELECTRONICS SYSTEM	2	0	2	0	3	NIL	ME
	20ME4076	AUTOMOBILE ENGINE SYSTEM AND PERFORMANCE	2	0	2	0	3	NIL	ME
	20ME4077	SUSTAINABLE DESIGN & SOCIAL INNOVATION IN AUTOMOBILE ENGINEERING	1	0	4	0	3	NIL	ME
Autotronics									
32	20ME4081	AUTOTRONICS	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4082	AUTOMOTIVE SESNSOR AND APPLICATIONS	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4083	ELECTRONIC ENGINE MANAGEMENT SYSTEM	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4084	INSTRUMENTATION IN AUTOMOTIVE INDUSTRIES	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4085	AUTOTRONICS AND VEHICLE INTELLIGENCE	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4086	AUTONOMOUS VEHICLE DESIGN	2	0	2	0	3	NIL	ME,EE, CSE, EC
	20ME4087	SUSTAINABLE DESIGN & SOCIAL INNOVATION IN AUTOTRONICS	1	0	4	0	3	NIL	ME,EE, CSE, EC
Product Design									
35	20ME4091	DESIGN FOR QUALITY AND RELIABILITY	3	0	0	0	3	NIL	ME
	20ME4092	DESIGN OF AGRICULTURAL PRODUCTS & MACHINERY	3	0	0	0	3	NIL	ME
	20ME4093	DESIGNING INTELLIGENCE SYSTEMS	3	0	0	0	3	NIL	ME
	20ME4094	SUSTAINABLE DESIGN	3	0	0	0	3	NIL	ME

	20ME4095	SYSTEMS THINKING FOR DESIGN	3	0	0	0	3	NIL	ME
	20ME4096	DESIGN WITH ADVANCED ENGINEERING MATERIALS	3	0	0	0	3	NIL	ME
	20ME4097	SUSTAINABLE DESIGN & SOCIAL INNOVATION IN PRODUCT DESIGN	1	0	4	0	3	NIL	ME
Autonomous Systems									
36	20AD3161	Introduction To Intelligent Drones	2	0	0	4	3	NIL	AD,CI,ME
	20AD3162	Expert Systems	2	0	2	0	3	NIL	AD,CI,ME
	20AD3263	Autonomous Driver Assistive Systems	2	0	0	4	3	NIL	AD,CI,ME
	20AD3264	Applied Deep Learning For Autonomous Systems	2	0	2	0	3	NIL	AD,CI,ME
	20AD3265	Localization & Path Planning For Autonomous Systems	3	0	0	0	3	NIL	AD,CI,ME
	20AD3066	Interfacing & Programming Real-Time Autonomous Systems	2	0	2	0	3	NIL	AD,CI,ME
Geo-Spatial Data Analytics									
37	20AD3171	Geo-Design And Geo-Visualization	2	0	0	4	3	NIL	AD,CI
	20AD3172	Remote Sensing & Gis	2	0	2	0	3	NIL	AD,CI
	20AD3273	Multivariate & Geographical Data Analysis	2	0	0	4	3	NIL	AD,CI
	20AD3274	Big Data Systems For Spatial DBMS	2	0	2	0	3	NIL	AD,CI
	20AD3275	Spatial Analysis In R	3	0	0	0	3	NIL	AD,CI
Medical Intelligence									
38	20AD3181	Clinical Data Science	2	0	0	4	3	NIL	AD,CI
	20AD3182	Genetic Programming	2	0	2	0	3	NIL	AD,CI
	20AD3283	Genomic Data Science & Clustering	2	0	0	4	3	NIL	AD,CI
	20AD3284	Intelligent Systems For Disease Prediction & Drug Discovery	2	0	2	0	3	NIL	AD,CI
	20AD3285	Computational Neuroscience	3	0	0	0	3	NIL	AD,CI
Iot Analytics									
39	20CI3161	Sensors & Actuators	2	0	0	4	3	NIL	AD,CI
	20CI3162	Anaytics On The Edge	2	0	2	0	3	NIL	AD,CI
	20CI3263	Video Analytics For Surveillance & Safety	2	0	0	4	3	NIL	AD,CI
	20CI3264	Data Lake Storage For Iot Data Management	2	0	2	0	3	NIL	AD,CI

	20CI3265	Precision Agriculture	3	0	0	0	3	NIL	AD,CI
Distributed Ledger Analytics										
40	20CI3171	Blockchain Analytics	2	0	0	4	3	NIL	AD,CI
	20CI3172	Distributed Ledger Architecture For Automation	2	0	2	0	3	NIL	AD,CI
	20CI3273	Automated Network Anaysis	2	0	0	4	3	NIL	AD,CI
	20CI3274	System & Network Traffic Security Analytics	2	0	2	0	3	NIL	AD,CI
	20CI3275	Multi Agent Systems	3	0	0	0	3	NIL	AD,CI
Social & Digital Media Analytics										
41	20CI3181	Sentiment Analysis	2	0	0	4	3	NIL	AD,CI
	20CI3182	Opinion Mining & Recommender Systems	2	0	2	0	3	NIL	AD,CI
	20CI3283	Social Media Marketing Analytics	2	0	0	4	3	NIL	AD,CI
	20CI3284	Digital Media Analytics	2	0	2	0	3	NIL	AD,CI
	20CI3285	Intelligent Social media Monitoring Systems	3	0	0	0	3	NIL	AD,CI

LIST OF OPEN ELECTIVES										**Credits**								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**Cr**	**Pre requisites**	**OFFERED TO**	**BT**	**CE**	**CS**	**EC**	**CM**	**EE**	**ME**	**AD**	**CI**
1	19BT40A1	Ipr & Patent Laws	3	0	0	0	3	NIL	CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
2	19CE40A2	Environmental Pollution Control Methods	3	0	0	0	3	NIL	BT, CS, EC, CM, EE, ME,AD, CI	3		3	3	3	3	3	3	3
3	19CE40A3	Solid And Hazardous Waste Management	3	0	0	0	3	NIL	BT, CS, EC, CM, EE, ME,AD, CI	3		3	3	3	3	3	3	3
4	19CE40A4	Remote Sensing & Gis	3	0	0	0	3	NIL	BT, CS, EC, CM, EE, ME,AD, CI	3		3	3	3	3	3	3	3
5	19CE40A5	Disaster Management	3	0	0	0	3	NIL	BT, CS, EC, CM, EE, ME,AD, CI	3		3	3	3	3	3	3	3
6	19CS40A6	Fundamentals Of Dbms	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3		3	3	3	3		
7	19CS40A7	Fundamentals Of Software Engineering	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3		3	3	3	3		

8	19CS40A8	Fundamentals Of Information Technology	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3		3	3	3	3		
9	19EC40A9	Image Processing	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3		3	3	3	3	3

10	19EE40B3	Renewable Energy Sources	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, ME,AD, CI	3	3	3	3	3		3	3	3
11	19EE40B4	Energy Estimation & Audit	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, ME,AD, CI	3	3	3	3	3		3	3	3
11	19ME40B4	Robotics	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
12	19ME40B5	Mechatronics	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
13	19ME40B6	Operations Research	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
14	19ME40B7	Hybrid Electric vehicles	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
15	19ME40B8	Industry 4.0	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
16	19ME40B9	Industrial Automation	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
17	19ME40C1	Logistics & Supply chain management	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
18	19ME40C2	Total Quality Management	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
19	19ME40C3	Smart Mobility	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
20	19ME40C4	Managerial Economics for Engineers	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, AD, CI	3	3	3	3	3	3		3	3
21	19PH40B7	Nano Materials & Technology	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
22	19GN40C1	Self-Development	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
23	19GN40C2	Indian Culture And History	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
24	19GN40C3	Emotional Intelligence	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
25	19GN40C4	Professional Ethics And Values	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
26	19GN40C5	Behavioural Sciences	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
27	19GN40C6	Gender Sensitization	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
28	19MB4051	Paradigms In Management Thought	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3

29	19MB4052	Indian Economy	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
30	19MB4053	Managing Personal Finances	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
31	19MB4054	Basics Of Marketing For Engineers	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
32	19MB4055	Organization Management	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
33	19MB4056	Resources Safety And Quality Management	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
34	19MB4057	Economics For Engineers	3	0	0	0	3	NIL	BT, CE, CS, EC, CM, EE, ME,AD, CI	3	3	3	3	3	3	3	3	3
LIST OF FOREIGN LANGUAGE ELECTIVES																		
1	19FL3051	Arabic Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
2	19FL3052	Bengali Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
3	19FL3053	Chinese Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
4	19FL3054	French Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
5	19FL3055	German Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
6	19FL3056	Hindi Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
7	19FL3057	Italian Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
8	19FL3058	Japanese Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
9	19FL3059	Kannada Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
10	19FL3060	Russian Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
11	19FL3061	Simhali Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2
12	19FL3062	Spanish Language	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME,PE	2	2	2	2	2	2	2	2	2

KONERU LAKSHMAIAH EDUCATION FOUNDATION								
Name of the Programme: B.Architecture								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	19AR1101	Climatology	3	0	0	0	3	Nill
2	19AR1103	Building Materials - I	2	0	0	0	2	Nill
3	19AR1204	Mechanics of Structures - I	3	0	0	0	3	Nill
4	19AR1206	Building Materials - II	2	0	0	0	2	Nill
5	19AR2107	Mechanics of Structures - II	3	0	0	0	3	Nill
6	19AR2210	Design of Structures - I	3	0	0	0	3	Nill
7	19AR2211	Building Services - I	3	0	0	0	3	Nill
8	19AR3114	Design of Structures - II	3	0	0	0	3	Nill
9	19AR3115	Building Services - II	3	0	0	0	3	Nill
10	19AR3219	Building Services - III	3	0	0	0	3	Nill
11	19AR4123	Building Services - IV	3	0	0	0	3	Nill
12	19AR2137	Building Construction - I	0	4	0	0	6	Nill
13	19AR2240	Building Construction - II	0	4	0	0	6	Nill
14	19AR3143	Building Construction - III	0	4	0	0	6	Nill
15	19AR3246	Building Construction - IV	0	4	0	0	6	Nill
16	19AR4149	Advanced Building Techniques	0	0	4	0	2	Nill
17	20UC0009	Ecology & Environment	2	0	0	0	0	Nill
18	19AR4226	Building Construction and Management	3	0	0	0	3	Nill
19	19AR5228	Architecture Professional Practice	3	0	0	0	3	Nill
20	19AR4252	Dissertation	0	4	0	0	6	Nill
21	19AR5154	Practical Training / Internship	0	0	40	0	20	19AR4253
22	19AR1102	History of Architecture - I	3	0	0	0	3	Nill
23	19AR1205	History of Architecture - II	3	0	0	0	3	Nill
24	19AR2108	History of Architecture - III	3	0	0	0	3	Nill
25	19AR2212	Site Analysis and Planning	2	0	0	0	2	Nill
26	19AR3218	Specification, Estimation and Costing	3	0	0	0	3	Nill
27	19AR3220	Human Settlements and Planning	2	0	0	0	2	Nill
28	19AR4122	Housing	2	0	0	0	2	Nill
29	19AR4225	Urban Design	2	0	0	0	2	Nill
30	19AR1130	Architectural Drawing - I	0	0	4	0	2	Nill
31	19AR1131	Architectural Design Studio -I (Basic Design)	0	8	0	0	12	Nill
32	19AR1232	Model Making Workshop	0	0	6	0	3	Nill
33	19AR1233	Architectural Drawing - II	0	0	4	0	2	Nill
34	19AR1234	Architectural Design Studio -II	0	8	0	0	12	19AR1131
35	19AR2138	Architectural Design Studio -III	0	8	0	0	12	19AR1234
36	19AR2241	Architectural Design Studio -IV	0	8	0	0	12	19AR2138

37	19AR3144	Architectural Design Studio -V	0	8	0	0	12	19AR2241
38	19AR3142	Interior Design Studio	0	0	4	0	2	Nill
39	19AR3245	Landscape Design Studio	0	0	4	0	2	Nill
40	19AR3247	Architectural Design Studio -VI	0	8	0	0	12	19AR3144
41	19AR4150	Architectural Design Studio -VII	0	10	0	0	15	19AR3247
42	19AR4253	Urban Design Studio	0	8	0	0	12	19AR4150
43	19AR5255	Architectural Thesis	0	12	0	0	18	19AR5154
44	19AR2213	Contemporary Indian Architecture	2	0	0	0	2	Nill
45	19AR3116	Contemporary Western Architecture	2	0	0	0	2	Nill
46	19AR3117A	Vernacular Architecture	2	0	0	0	2	Nill
47	19AR3117B	Sustainable Architecture - I	2	0	0	0	2	Nill
48	19AR3221A	Appropriate Building Technologies	2	0	0	0	2	Nill
49	19AR3221B	Sustainable Architecture - II	2	0	0	0	2	Nill
50	19AR4124A	Architectural Conservation	3	0	0	0	3	Nill
51	19AR4124B	Set Design	3	0	0	0	3	Nill
52	19AR4227A	Behavioral Architecture	3	0	0	0	3	Nill
53	19AR4227B	Disaster Mitigation and Management	3	0	0	0	3	Nill
54	19AR1129	Art and Visual Graphic Studio	0	0	6	0	3	Nill
55	19AR2135	Surveying and Levelling	0	0	4	0	2	Nill
56	19AR2136	Computer Studio - I	0	0	4	0	2	Nill
57	19AR2239	Computer Studio - II	0	0	4	0	2	Nill
58	19AR4148	Working Drawing - I	0	0	4	0	2	Nill
59	19AR4251	Working Drawing - II	0	0	4	0	2	Nill
60	20UC1101	Integrated Professional English	0	0	4	0	2	Nill
61	20UC1202	English Proficiency	0	0	4	0	0	Nill
62	20UC0008	Indian Constitution	2	0	0	0	0	Nill
63	20UC0010	Universal Human Values & Professional Ethics	2	0	0	0	0	Nill
64	19HC210	Self-Management	2	0	0	0	2	Nill
65	19FL4001	Foreign Language - French	2	0	0	0	2	Nill
66	19FL4002	Foreign Language - German	2	0	0	0	2	Nill
67	19BB32C1	Human Resource Management	2	0	0	0	2	Nill
68	19BB32C3	Innovation and Entrepreneurship	2	0	0	0	2	Nill

Name of the Programme: BCA								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	20UC1101	Integrated Professional English	0	0	4	0	2	Nil
2	20MT1105	Fundamentals of Mathematics	3	0	2	0	4	Nil
3	20CA1101	Programming in C	3	0	2	0	4	Nil
4	20CA1102	Operating Systems	3	1	0	0	4	Nil
5	20CA1103	Software Engineering	3	0	0	0	3	Nil
6	20CA1104	DLD&CO	3	0	0	0	3	Nil
7	20UC0009	Ecology & Environment	2	0	0	0	0	Nil
8	20CA1105	Technical Skills-1	0	0	0	8	2	Nil
9	20UC1202	English Proficiency	0	0	4	0	2	Nil
10	20CA1206	Object Oriented Programming Using Java	2	0	2	0	3	20CA1101
11	20CA1207	Data Structures	2	0	2	0	3	20CA1101
12	20CA1208	Computer Networks	3	1	0	0	4	Nil
13	20CA1209	Computer Oriented Statistics	3	0	2	0	4	Nil
14	20CA1210	Database Management System	3	0	2	0	4	Nil
15	20UC0010	Universal Human Values & Professional Ethics	2	0	0	0	0	Nil
16	20CA1211	Technical Skills-2	0	0	0	8	2	Nil
17	20CA2117	Client Side Scripting	2	0	2	0	3	20CA1206
18	20CA2118	Technical Skills-3	0	0	0	8	2	Nil
19	20UC2103	Professional Communication Skills	0	0	4	0	2	
20	20CA2219	Python Programming	2	0	2	0	3	20CA1101
21	20CA2224	Technical Skills-4	0	0	0	8	2	Nil
22	19UC3105	Aptitude Builder – 2	0	0	4	0	2	Nil
23	20CA3131	Internship	0	0	4	0	2	Nil
24	20CA3132	Technical Skills-5	0	0	0	8	2	Nil
25		Management Elective-1	3	0	0	0	3	Nil
26		Management Elective-2	3	0	0	0	3	Nil
27	20CA3048	Major Project /Internship	0	0	24	0	12	Nil
28	20CA2112	Linux Administration	3	0	2	0	4	Nil
29	20CA2113	Information Storage and Management	3	0	0	0	3	Nil
30	20CA2114	Principles of Virtualization	2	0	2	0	3	Nil

31	20CA2115	Network & Information Security	3	1	0	0	4	20CA1208
32	20CA2116	Installation and Configuration of Server	2	0	2	0	3	Nil
33	20CA2220	Cloud Computing	2	0	2	0	3	Nil
34	20CA2221	Ethical Hacking	2	0	2	0	3	20CA2115
35	20CA2222	Cloud Web Services	3	0	0	0	3	Nil
36	20CA2223	Powershell Scripting	3	0	2	0	4	20CA2116
37	20CA3125	Virtualization and Cloud Security	2	1	2	0	4	20CA2114
38	20CA3126	Cloud Deployment	2	0	2	0	3	20CA2220
39	20CA3127	Digital Forensics	2	0	2	0	3	Nil
40	20CA3128	Hybrid Cloud Computing	3	0	0	0	3	20CA2222
41	20CA3129	Administrating Cloud Services(Elec-I)	3	0	0	0	3	Nil
42	20CA3130	Google App Engine (Elec-I)						Nil
43	20CA2132	Introduction to Data Science with R Programming	2	0	2	0	3	20CA1210
44	20CA2133	Data Mining	2	0	2	0	3	20CA1210
45	20CA2134	Linear Algebra	2	0	2	0	3	Nil
46	20CA2135	Sampling Methods & Exploratory Data Analysis	3	1	0	0	4	Nil
47	20CA2136	Design and Analysis of Algorithms	3	1	0	0	4	20CA1207
48	20CA2237	Big Data Analytics	2	0	2	0	3	20CA2133
49	20CA2238	Machine Learning	2	0	2	0	3	20CA1210
50	20CA2239	NoSQL Databases	2	0	2	0	3	20CA1210
51	20CA2240	Data Visualization	2	0	2	0	3	Nil
52	20CA3141	Soft Computing	2	0	2	0	3	Nil
53	20CA3142	Advanced Big Data Analytics	2	0	2	0	3	20CA2237
54	20CA3143	Optimization Techniques	3	0	0	0	3	Nil
55	20CA3144	Deep Learning	3	0	0	0	3	20CA2238
56	20CA3145	Information Retrieval System (Elec-I)	3	1	0	0	4	Nil
57	20CA3146	Econometrics (Elec-I)						Nil

NAME OF THE PROGRAMME: B.PHARMACY								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	20PY1101T	Human Anatomy and Physiology I (Theory)	3	1	0	0	4	Nil
2	20PY1101P	Human Anatomy and Physiology I (Practical)	0	0	4	0	2	Nil
3	20PY1102T	Pharmaceutical Analysis I (Theory)	3	1	0	0	4	Nil
4	20PY1102P	Pharmaceutical Analysis I (Practical)	0	0	4	0	2	Nil
5	20PY1103T	General Pharmaceutics (Theory)	3	1	0	0	4	Nil
6	20PY1103P	General Pharmaceutics (Practical)	0	0	4	0	2	Nil
7	20PY1104T	Pharmaceutical Inorganic Chemistry (Theory)	3	1	0	0	4	Nil
8	20PY1104P	Pharmaceutical Inorganic Chemistry	0	0	4	0	2	Nil
9	20PY1105T	Communication skills * (Theory)	2	0	0	0	2	Nil
10	20PY1105P	Communication skills* (Practical)	0	0	2	0	1	Nil
11	20PY1106RBT/RMT	Remedial Biology/Remedial Mathematics* (Theory)	2	0	0	0	2	Nil
12	20PY1106RBP	Remedial Biology* (Practical)	0	0	2	0	1	Nil
13	20PY1207T	Human Anatomy and Physiology II (Theory)	3	1	0	0	4	Nil
14	20PY1207P	Human Anatomy and Physiology II (Practical)	0	0	4	0	2	Nil
15	20PY1208T	Pharmaceutical Organic Chemistry I (Theory)	3	1	0	0	4	Nil
16	20PY1208P	Pharmaceutical Organic Chemistry I (Practical)	0	0	4	0	2	Nil
17	20PY1209T	Biochemistry (Theory)	3	1	0	0	4	Nil
18	20PY1209P	Biochemistry (Practical)	0	0	4	0	2	Nil
19	20PY1210T	Pathophysiology (Theory)	3	1	0	0	4	Nil
20	20PY1211T	Computer Applications in Pharmacy* (Theory)	3	0	0	0	3	Nil
21	20PY1211P	Computer Applications in Pharmacy* (Practical)	0	0	2	0	1	Nil
22	20PY1212T	Environmental sciences * (Theory)	3	0	0	0	3	Nil

23	20UC1202	English Proficiency	0	0	4	0	2	Nil
24	20PY2113T	Pharmaceutical Organic Chemistry II (Theory)	3	1	0	0	4	Nil
25	20PY2113P	Pharmaceutical Organic Chemistry II (Practical)	0	0	4	0	2	Nil
26	20PY2114T	Physical Pharmaceutics I (Theory)	3	1	0	0	4	Nil
27	20PY2114P	Physical Pharmaceutics I (Practical)	0	0	4	0	2	Nil
28	20PY2115T	Pharmaceutical Microbiology (Theory)	3	1	0	0	4	Nil
29	20PY2115P	Pharmaceutical Microbiology (Practical)	0	0	4	0	2	Nil
30	20PY2116T	Pharmaceutical Engineering (Theory)	3	1	0	0	4	Nil
31	20PY2116P	Pharmaceutical Engineering (Practical)	0	0	4	0	2	Nil
32	20UC2103	Professional Communication skills	0	0	4	0	2	Nil
33	20PY2217T	Pharmaceutical Organic Chemistry III (Theory)	3	1	0	0	4	Nil
34	20PY2218T	Medicinal Chemistry I (Theory)	3	1	0	0	4	Nil
35	20PY2218P	Medicinal Chemistry I (Practical)	0	0	4	0	2	Nil
36	20PY2219T	Physical Pharmaceutics II (Theory)	3	1	0	0	4	Nil
37	20PY2219P	Physical Pharmaceutics II (Practical)	0	0	4	0	2	Nil
38	20PY2220T	Pharmacology I (Theory)	3	1	0	0	4	Nil
39	20PY2220P	Pharmacology I (Practical)	0	0	4	0	2	Nil
40	20PY2221T	Pharmacognosy and Phytochemistry I (Theory)	3	1	0	0	4	Nil
41	20PY2221P	Pharmacognosy and Phytochemistry I (Practical)	0	0	4	0	2	Nil
42	20UC2204	Corporate Communication Skills	0	0	4	0	2	Nil
43	20PY3122T	Medicinal Chemistry II (Theory)	3	1	0	0	4	Nil
44	20PY3123T	Industrial Pharmacy I (Theory)	3	1	0	0	4	Nil
45	20PY3123P	Industrial Pharmacy I (Practical)	0	0	4	0	2	Nil
46	20PY3124T	Pharmacology II (Theory)	3	1	0	0	4	Nil
47	20PY3124P	Pharmacology II (Practical)	0	0	4	0	2	Nil

48	20PY3125T	Pharmacognosy and Phytochemistry II (Theory)	3	1	0	0	4	Nil
49	20PY3125P	Pharmacognosy and Phytochemistry II (Practical)	0	0	4	0	2	Nil
50	20PY3126T	Pharmaceutical Jurisprudence (Theory)	3	1	0	0	4	Nil
51	20UC3005	Aptitude builder	0	0	4	0	2	Nil
52	20PY3227T	Medicinal Chemistry III (Theory)	3	1	0	0	4	Nil
53	20PY3227P	Medicinal chemistry III (Practical)	0	0	4	0	2	Nil
54	20PY3228T	Pharmacology III (Theory)	3	1	0	0	4	Nil
55	20PY3228P	Pharmacology III (Practical)	0	0	4	0	2	Nil
56	20PY3229T	Herbal Drug Technology (Theory)	3	1	0	0	4	Nil
57	20PY3229P	Herbal Drug Technology (Practical)	0	0	4	0	2	Nil
58	20PY3230T	Biopharmaceutics and Pharmacokinetics (Theory)	3	1	0	0	4	Nil
59	20PY3231T	Pharmaceutical Biotechnology (Theory)	3	1	0	0	4	Nil
60	20PY3232T	Quality Assurance (Theory)	3	1	0	0	4	Nil
61	20PY4133T	Instrumental Methods of Analysis (Theory)	3	1	0	0	4	Nil
62	20PY4133P	Instrumental Methods of Analysis (Practical)	0	0	4	0	2	Nil
63	20PY4134T	Industrial Pharmacy II (Theory)	3	1	0	0	4	Nil
64	20PY4135T	Pharmacy Practice (Theory)	3	1	0	0	4	Nil
65	20PY4136T	Novel Drug Delivery System (Theory)	3	1	0	0	4	Nil
66	20PY4137PS	Practice School*	0	0	12	0	6	Nil
67	20UC0010	Universal Human Values and Professional Ethics	2	0	0	0	0	Nil
68	20PY4238T	Biostatistics and Research Methodology (Theory)	3	1	0	0	4	Nil
69	20PY4239T	Social and Preventive Pharmacy (Theory)	3	1	0	0	4	Nil
70	20PY4240ET	Pharma Marketing Management (Theory)	3	1	0	0	4+4	Nil
71	20PY4241ET	Pharmaceutical Regulatory Science (Theory)	3	1	0	0		Nil
72	20PY4242ET	Pharmacovigilance (Theory)	3	1	0	0		Nil
73	20PY4243ET	Quality Control and Standardization of Herbals	3	1	0	0		Nil

		(Theory)						
74	20PY4244ET	Computer Aided Drug Design (Theory)	3	1	0	0		Nil
75	20PY4245ET	Cell and Molecular Biology (Theory)	3	1	0	0		Nil
76	20PY4246ET	Cosmetic Science (Theory)	3	1	0	0		Nil
77	20PY4247ET	Experimental Pharmacology (Theory)	3	1	0	0		Nil
78	20PY4248ET	Advanced Instrumentation Techniques (Theory)	3	1	0	0		Nil
79	20PY4249ET	Dietary Supplements and Nutraceuticals (Theory)	3	1	0	0		Nil
80	20PY4250PW	Project Work	0	0	12	0	6	Nil

Name of the Programme: B.Sc(Visual Communication)

S.No	Course code	Course Name	L	T	P	S	Cr	Pre requisites
1	20UC1101	Integrated Professional English	0	0	4	0	2	Nill
2	20UC0009	Ecology & Environment	2	0	0	0	0	Nill
3	20VC1101	Introduction to Visual Communication	3	0	0	0	3	Nill
4	20VC1102	Design Basics	1	0	6	0	4	Nill
5	20VC1103	Drawing Basics	1	0	6	0	4	Nill
6	20VC1104	Basics of Photography	1	0	6	0	4	Nill
7	20VC1105	Writing for Media	3	0	0	0	3	Nill
8	20UC1202	English Proficiency	0	0	4	0	2	Nill
9	19GN11T1/ 19GN3054	Language -Telugu/French	2	0	0	0	2	Nill
10	20UC0010	Universal Human Values & Professional Ethics	2	0	0	0	0	Nill
11	20VC1201	Digital Literacy	3	0	0	0	3	Nill
12	20VC1202	Introduction to Film Studies	3	0	0	0	3	Nill
13	20VC1203	Drawing – Advanced	1	0	6	0	4	Nill
14	20VC1204	Basics of Graphic Design	1	0	4	0	3	Nill
15	20VC1205	Basics of Advertising	3	0	0	0	3	Nill
16	20UC2103	Professional Communication Skills	0	0	4	0	2	Nill
17	20VC2101	Art, Aesthetics and Media	3	0	0	0	3	Nill
18	20VC2102	Visual Analysis Tools	3	0	0	0	3	Nill
19	20VC2103	Graphic Design advanced	0	0	6	0	3	Nill
20	20UC3005	Aptitude Builder	0	0	4	0	2	Nill

21	20VC2201	Year End Project	0	0	4	0	2	Nill
22	20VC2202	Media Culture & Society	3	0	0	0	3	Nill
23	20VC2203	Medial Laws and Ethics	3	0	0	0	3	Nill
24	20VC3101	Media Management & Entrepreneurship	3	0	0	0	3	Nill
25	20VC3102	Media Research Methods	3	0	0	0	3	Nill
26	20VC3103	Term Paper	0	0	4	0	2	Nill
27	19IE4051	Internship	0	0	0	24	6	Nill
28	20VC3202	Major Project	8	0	0	0	8	Nill
29	20VC3203	Portfolio/Presentation	8	0	0	0	8	Nill
Specialisation - 1 (Advertising)								
1	20VC2104	Media & Marketing Management	3	0	0	0	3	Nill
2	20VC2105	Advertising Basics and Concepts	0	0	8	0	4	Nill
3	20VC2106	Creative Communication	3	0	0	0	3	Nill
4	20VC2204	PR Principles and Issues	1	0	6	0	4	Nill
5	20VC2205	Commercial Production	0	0	6	0	3	Nill
6	20VC2206	Print and Web Publishing	3	0	0	0	3	Nill
7	20VC3104	Concepts of Event Planning	3	0	0	0	3	Nill
8	20VC3105	Audio Production	0	0	8	0	4	Nill
9	20VC3106	Marketing and Brand Management	1	0	6	0	4	Nill
Specialisation - 2 (Filmmaking)								
1	20VC2107	Understanding Still and Moving Images	3	0	0	0	3	Nill
2	20VC2108	Audio Video Editing Techniques	0	0	6	0	3	Nill
3	20VC2109	Screen Writing and Story Boarding	1	0	6	0	4	Nill
4	20VC2207	Indian Cinema	3	0	0	0	3	Nill
5	20VC2208	Television Production	0	0	6	0	3	Nill
6	20VC2209	Basics of Post Production Tools	1	0	6	0	4	Nill
7	20VC3107	Introduction to Film Genres	3	0	0	0	3	Nill
8	20VC3108	Practical Filmmaking	0	0	8	0	4	Nill
9	20VC3109	Advanced Post Production Tools	1	0	6	0	4	Nill
Specialisation - 3 (Animation)								
1	20VC2110	Sketching for Animation	0	0	6	0	3	Nill
2	20VC2111	2D Digital Animation	0	0	6	0	3	Nill
3	20VC2112	Concepts of 3D	1	0	6	0	4	Nill
4	20VC2210	Modelling and Texturing	0	0	6	0	3	Nill

5	20VC2211	Lighting & Rendering	0	0	6	0	3	Nill
6	20VC2212	Basic Animation and Simulation	1	0	6	0	4	Nill
7	20VC3110	Advanced 3D Motion (Dynamics)	0	0	6	0	3	Nill
8	20VC3111	Advanced Character Animation	0	0	8	0	4	Nill
9	20VC3112	Advanced Post Production Tools	1	0	6	0	4	Nill

Name of the Programme: B. Com (Honors)

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	20UC1101	Integrated Professional English	0	0	4	0	2	
2	20CM1101	Accountant in Business	3	2	0	0	5	
3	20CM1102	Principles of Accounting	3	2	0	0	5	
4	20CM1103	Principles of Management	3	0	0	0	3	
5	20CM1104	Fundamentals of Cost Accounting	3	2	0	0	5	
6	20UC0007	Indian Heritage & Culture	2	0	0	0	0	
7	20UC1202	English Proficiency	0	0	4	0	2	
8	20CM1207	Advanced Cost Accounting	3	2	0	0	5	20CM1104
9	20CM1208	Introduction to Income Tax	3	2	0	0	5	
10	20CM1209	Business Mathematics & Statistics	3	2	0	0	5	
11	20CM1210	Corporate and Business law	4	0	0	0	4	
12	20UC0009	Ecology & Environment	2	0	0	0	0	
13	20PT1101	Practice School / SIP	0	0	0	24	6	
14	20CM2118	Advanced Accounting	3	2	0	0	5	20CM1102
15	20CM2114	Corporate Financial Management	3	2	0	0	5	
16	20CM2115	Introduction to Auditing	3	0	0	0	3	
17	20CM2116	Assessment of Direct Taxes	3	2	0	0	5	20CM1208
18	20CM2117	Management Accounting	3	2	0	0	5	
19	20CM2119	Introduction to Corporate Accounting	3	2	0	0	5	
20	20UC2203	Professional Communication Skills	0	0	4	0	2	
21	20CM2219	Advanced Corporate Accounting	3	2	0	0	5	20CM2119
22	20CM2221	Accounting Information System	3	2	0	0	5	
23	20CM2222	Banking Law and Practice	3	0	0	0	3	
24	20CM2223	Corporate Report Writing	3	0	0	0	3	
25	20PT2101	Practice School / SIP	0	0	0	24	6	

26	20FL3103	French (Foreign Language)	0	0	4	0	2	
27	20CM3124	Goods and Service Tax	3	2	0	0	5	
28	20CM3125	Business Strategy	3	2	0	0	5	
29	20CM3126	Accounting & Reporting Standards	3	2	0	0	5	
30	20CM31xx	Elective – I	3	2	0	0	5	
31	20CM31xx	Elective- II	3	2	0	0	5	
32	20CM1105	Corporate Accounting	3	2	0	0	5	
33	20ACCAF7	Financial Reporting	3	2	0	0	5	20CM1102 & 20CM1105
34	20CM2113	Performance Management – I	3	2	0	0	5	
35	20CM2116	Assessment of Direct Taxes	3	2	0	0	5	20CM1208
36	20CM2117	Management Accounting	3	2	0	0	5	
37	20ACCAF9	Financial Management	3	2	0	0	5	
38	20ACCAF8	Audit and Assurance Standards	4	0	0	0	4	
39	20CM2220	Performance Management-II	3	2	0	0	5	20CM2113
40	20ACCAP1	Strategic Business Leader	3	2	0	0	5	
41	20UC3005	Aptitude Builder	0	0	4	0	2	
42	20CM3229	Accounting Information System	3	2	0	0	5	
43	20ACCAP2	Strategic Business Reporting	3	2	0	0	5	
44	20ACCAP4	Advanced Financial Management	3	2	0	0	5	
45	20ACCAP7	Advanced Audit and Assurance	3	2	0	0	5	
Elective - 1								
1	20CM3127	Corporate Tax Planning & Management	3	2	0	0	5	
2	20CM3128	Advanced Cost & Management Accounting	3	2	0	0	5	
3	20CM3129	Corporate Restructure	3	2	0	0	5	
4	20CM3130	Entrepreneurship Development	3	2	0	0	5	
Elective - 2								
1	20CM3131	Financial Derivatives	3	2	0	0	5	
2	20CM3132	Strategic Financial management	3	2	0	0	5	
3	20CM3133	Export and Import documentation	3	2	0	0	5	
4	20CM3134	Security analysis & Portfolio Management	3	2	0	0	5	
5	20PT3230	Industrial Training	0	0	0	72	18	

Name of the Programme: B. Com (Computer Application)								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	20UC1101	Integrated Professional English	0	0	4	0	2	
2	20CM1121	Managerial Economics	3	0	0	0	3	
3	20CM1122	Fundamentals of Accounting	3	2	0	0	5	
4	20CM1123	Fundamentals of Income Tax	3	2	0	0	5	
5	20CM1124	EA – Individual Taxation	1	2	2	4	5	
6	20CM1124	Computer Application Practical - (MS Office)	1	0	2	4	3	
7	20UC1203	Professional Communication Skills	0	0	4	0	2	
8	20CM1221	Principles of Organization & Management	3	0	0	0	3	
9	20CM1222	Financial Accounting	3	2	0	0	5	20CM1122
10	20CM1223	Introduction to Cost Accounting	3	2	0	0	5	
11	20CM1224	EA – Business Taxation – I	1	2	2	4	5	20CM1124
12	20CM1225	System Audit	3	0	0	0	3	
13	20CM1226	Computer Application Practical – II (Tally)	1	0	2	4	3	
14	20PT1101	Practice School / SIP	0	0	0	24	6	
15	20UC2103	Management Soft Skills	0	0	4	0	2	
16	20CM2116	Assessment of Direct Taxes	3	2	0	0	5	20CM1123
17	20CM2119	Introduction to Corporate	3	2	0	0	5	
		Accounting						
18	20CM2122	Advanced Cost and Management Accounting	3	2	0	0	5	20CM1223
19	20CM2124	Cloud Accounting	1	0	2	4	3	
20	20CM2126	EA – Business Taxation – II	1	2	2	4	5	
21	20PT2230	Industrial Training	0	0	0	72	18	
22	20PT2101	Practice School / SIP	0	0	0	24	6	
23	20CM3103	French (Foreign Language)	2	0	0	0	2	
24	20CM3121	Advanced Corporate Accounting	3	2	0	0	5	
25	20CM3124	Goods and Services Tax	3	2	0	0	5	
26	20CM3127	Corporate Tax Planning &Management	3	2	0	0	5	
27	20CM3128	EA – Presentation, Practices &Procedures	1	2	2	4	5	
28	20CM3129	Block Chain Accounting	1	0	2	4	3	
29	20PT3230	Industrial Training	0	0	0	72	18	

Name of the Programme: B.Sc (Hotel Management)								
S.No	**Course code**	**Course Name**	**L**	**T**	**P**	**S**	**Cr**	**Pre requisites**

1	20HM11E1	English Communication Skills	0	0	4	0	2	Nill
2	20HM11C6	Introduction to Food Production	2	0	4	0	4	Nill
3	20HM11C7	Introduction to Food & Beverage Service	2	0	2	0	3	Nill
4	20HM11C8	Introduction to House Keeping	2	0	2	0	3	Nill
5	20HM11C9	Introduction to Front Office	2	0	2	0	3	Nill
6	20HM11L1	Basic French	3	0	0	0	3	Nill
7	20UC0010	Universal Human values & Professional Skills	2	0	0	0	0	Nill
8	20HM12C6	Principles of Food Production	2	0	4	0	4	Nill
9	20HM12C7	Principles of Food & Beverage Service	2	0	2	0	3	Nill
10	20HM12C8	Principles of House Keeping	2	0	2	0	3	Nill
11	20HM12C9	Principles of Front Office	2	0	2	0	3	Nill
12	20HM12K0	Introduction to Information Technology	2	0	2	0	3	Nill
13	20HM12K1	Food Science & Nutrition	3	0	0	0	3	Nill
14	20HM21E2	English Writing Skills	1	0	4	0	3	Nill
15	20HM21C6	Food Production Operations	2	0	4	0	4	Nill
16	20HM21C7	Food & Beverage Services Operations	2	0	2	0	3	Nill
17	20HM21C8	Accommodation Operations	2	0	2	0	3	Nill
18	20HM21F0	Hotel Accountancy	3	0	0	0	3	Nill
19	20HM21K2	Hotel Engineering	3	0	0	0	3	Nill
20	20UC0009	Ecology & Environment	2	0	0	0	0	Nill
21	20HM22E3	Entrepreneur Soft Skills For Hospitality	1	0	4	0	3	Nill
22	20HM22C6	Food Production Management	2	0	4	0	4	Nill
23	20HM22C7	Food & Beverage Services Management	2	0	2	0	3	Nill
24	20HM22C8	Accommodation management	2	0	2	0	3	Nill
25	20HM22K3	Human Resource Management	3	0	0	0	3	Nill
26	20HM22K4	Hotel law	3	0	0	0	3	Nill
27	20UC0007	Indian Heritage & Culture	2	0	0	0	0	Nill
28	19UC3206	Campus To Hospitality Industry	0	0	4	0	2	Nill
29	20HM31XX	Elective - I	2	0	4	0	4	Nill
30	20HM31K5	Hospitality Service Management	3	0	0	0	3	Nill
31	20HM31K6	Entrepreneurship	3	0	0	0	3	Nill
32	20HM31K7	Travel & Tourism Management	3	0	0	0	3	Nill
33	20HM31P0	Hotel Industry Project	1	0	6	0	4	Nill
34	20HM31E1	Advanced Food Production	2	0	4	0	4	Nill
35	20HM31E2	Advanced Food & Beverage Services	2	0	4	0	4	Nill
36	20HM31E3	Advanced Accommodation Management	2	0	4	0	4	Nill

37	20HM12N0	Summer Internship (2 Months)	0	0	0	18	9	Nill
38	20HM22N1	Summer Internship (2 Months)	0	0	0	18	9	Nill
39	20HM32N2	Industrial Internship (4 Months)	0	0	0	36	18	Nill

Name of the Programme: BBA

S No	Course Code	Course Title	L	T	P	S	CR	Pre requisites
1	19BB11C0	Business Communication Skills I	0	0	4	0	2	NIL
2	19BS114	Business Mathematics	3	1	0	0	4	NIL
3	19BB11C2	Business Environment	3	0	0	0	3	NIL
4	19BB11C3	Business Economics	3	0	0	0	3	NIL
5	19BB11C4	Perspectives of Management	3	0	0	0	3	NIL
6	19BB11K1	Foreign Language I	2	0	2	0	3	NIL
7	19BB11C6	Campus to Corporate 1	0	0	2	0	1	NIL
8	19BB12C0	Business Communication Skills II	0	0	4	0	2	NIL
9	19BB12C1	Introduction to Financial Accounting	3	1	0	0	4	NIL
10	19BS115	Business Statistics	3	1	0	0	4	NIL
11	19BB12C3	Organizational Behavior	3	0	0	0	3	NIL
12	20UC0009	Ecology & Environment	2	0	0	0	0	NIL
13	19BB12K2	Foreign Language II	2	0	2	0	3	NIL
14	19BB12C6	Campus to Corporate 2	0	0	2	0	1	NIL
15	19BB10P0	Summer Internship Program	0	0	0	24	6	NIL
16	19BB21C0	Business Communication Skills - III	0	0	4	0	2	NIL
17	19BB21C1	Management Accountancy	3	1	0	0	4	NIL
18	19BB21C2	Marketing Management	3	0	0	0	3	NIL
19	19BB21C3	Human Resource Management	3	0	0	0	3	NIL
20	19BB21C4	Business Research Methods	3	0	0	0	3	NIL
21	20BB21C5	Macro economics	2	0	2	0	3	NIL
22	19BB21C6	Campus to Corporate 3	0	0	2	0	1	NIL
23	19BB22C0	Cost Accountancy	3	1	0	0	4	NIL
24	19BB22C1	Production and Operations Management	3	1	0	0	4	NIL
25	19BB22C2	Management Information Systems	3	0	0	0	3	NIL
26	19BB22C3	Business Law	3	0	0	0	3	NIL
27	19BB22C4	Financial Management	3	1	0	0	4	NIL
28	20BB22C5	Business Model Generation	2	0	2	0	3	NIL
29	19BB22C6	Campus to Corporate 4	0	0	2	0	1	NIL
30	19BB20P1	Summer Internship Program	0	0	0	24	6	NIL
31	19BB31C0	Business analytics	2	0	2	0	3	NIL
32	19HS115	Soft Skills	2	0	2	0	3	NIL
33	19BB31C2	Fundamentals of Digital Marketing	3	0	0	0	3	NIL
34	19BB31M0	Product Management	3	0	0	0	3	NIL

35	19BB31F0	Banking & Insurance Management						NIL
36	19BB31H0	Personal Effectiveness and Self-Leadership						NIL
37	19BB31M1	Basics of Sales Mgt	3	0	0	0	3	NIL
38	19BB31F1	Direct Taxation						NIL
39	19BB31H1	Talent Acquisition						NIL
40	19BB31C5	Introduction to Data Management.	2	0	2	0	3	NIL
41	19BB31C6	Campus to Corporate 5	0	0	2	0	1	NIL
42	19BB32C0	Entrepreneurship	3	0	0	0	3	NIL
43	19BB32C1	Strategic Management	3	0	0	0	3	NIL
44	19BB32C2	Enterprise Resource Planning	3	0	0	0	3	NIL
45	19BB32C3	Creativity & Innovation				0		NIL
46	19BB32C4	Yoga & Health				0		NIL
47	19BB32M2	Integrated Marketing Communication	3	0	0	0	3	NIL
48	19BB32F2	Financial Markets				0		NIL
49	19BB32H2	Cross Cultural Management				0		NIL
50	19BB32M3	Services Marketing	3	0	0	0	3	NIL
51	19BB32F3	Management of Personal Finance				0		NIL
52	19BB32H3	Legal Aspects of HRM				0		NIL
53	19BB32C7	Campus to Corporate 6	0	0	2	0	1	NIL
54	19BB30P2	Project Work	0	0	0	24	6	NIL
55	19CMA 1A	Financial Planning, Performance & Analytics	3	1	0	0	4	NIL
56	19CMA 2A	Strategic Financial Management - I	3	1	0	0	4	NIL
57	19CMA 2B	Strategic Financial Management - II	3	1	0	0	4	NIL
58	19BU21C1	DBMS &SQL	2	0	2	0	3	NIL
59	19BU21C4	Research Methodology with SPSS	2	0	2	0	3	NIL
60	19BU22C1	Introduction to Business Analytics	3	0	2	0	4	NIL
61	19BU22C2	Basics of R programming	2	0	4	0	4	NIL
62	19BU22C4	Mini Project	2	0	12	0	8	NIL
63	19BU31C0	Time Series Econometrics	3	0	2	0	4	NIL
64	19BU31C1	Client Relationship Management	3	0	0	0	3	NIL
65	19BU31C2	Data Visualization with Tableau	2	0	2	0	3	NIL
66	19BU31C3	Spreadsheet Modeling Using VBA	3	0	2	0	4	NIL
67	19BU32C0	Business Intelligence & Data Mining	3	0	0	0	3	NIL
68	19BU32C2	Predictive Analytics & Decision Making	2	0	4	0	4	NIL
69	19BU32C3	Data Analysis with Python	2	0	4	0	4	NIL
70	19BU31C5	Optimization	4	0	0	0	4	NIL
71	19LG11C2	Fundamentals of Logistics	3	0	0	0	3	NIL
72	19LG11C5	Materials Management	3	1	0	0	4	NIL
73	19LG11C6	Warehousing and Distribution Centre Operations	3	0	0	0	3	NIL
74	19LG12C0	Materials Management – Practical	0	0	4	0	2	NIL
75	19LG12C1	Warehousing Management – Practical	0	0	4	0	2	NIL

76	19CMA 1B	Financial Reporting & Control	3	1	0	0	4	NIL
77	19BB31C1	Fundamentals of Digital Marketing	3	0	0	0	3	NIL
78	19BU11C2	Excel for Business Applications	2	0	2	0	3	NIL
79	19BB12C2	Business Statistics	3	1	0	0	4	NIL
80	19BB10E0	Summer Internship Program	0	0	0	24	6	NIL
Allied Course (1 out of 2) – MOOC*								
1	19LG12A0	Warehouse Automation	**0**	**0**	6	0	**3**	NIL
2	19LG12A1	Best Practices in Transportation	**0**	**0**	6	0	**3**	NIL
3	19LG21C2	Freight Forwarding (Ocean & Air Cargo)	3	0	0	0	3	NIL
4	19LG21C3	Forecasting and Inventory Management	3	1	0	0	4	NIL
5	19LG21C4	Surface Transportation	3	0	0	0	3	NIL
6	19LG21C6	Management and Cost Accounting	3	1	0	0	4	NIL
7	19LG22C0	Surface Transportation - Practical	0	0	4	0	2	NIL
8	19LG22C1	Forecasting and Inventory Management - Practical	0	0	4	0	2	NIL
9	19LG12C3	Apprenticeship – I	0	0	46	0	23	NIL
10	19BB12C0	Business Communication Skills II	0	0	4	0	2	NIL
11	19BB11K1	Foreign Language	2	0	2	0	3	NIL
12	19BB21C3	Human Resources Management	3	0	0	0	3	NIL
Allied Course (1 out of 2) – MOOC*								
1	19LG22A2	Inland Waterways & Costal Shipping	**0**	**0**	6	0	**3**	NIL
2	19LG22A3	Courier, Express & Parcel Services	**0**	**0**	6	0	**3**	NIL
3	19LG31C0	MIS for Logistics	3	1	0	0	4	NIL
4	19LG31C1	International Logistics Management	3	0	0	0	3	NIL
5	19LG31C3	Retail Logistics and E-Commerce	3	0	0	0	3	NIL
6	19LG31C4	Logistics Network Design	3	1	0	0	4	NIL
7	19LG31C5	Port Terminal Logistics	3	0	0	0	3	NIL
8	19LG31C6	Liner Logistics	3	0	0	0	3	NIL
9	19LG32C0	Logistics Network Design- Practical	0	0	4	0	2	NIL
10	19LG32C1	Freight Forwarding - Practical	0	0	4	0	2	NIL
11	19LG22C3	Apprenticeship - II	0	0	46	0	23	NIL
12	19BB21C2	Marketing Management	3	0	0	0	3	NIL
Allied Course (1 out of 2) – MOOC*								
1	19LG32A4	Inplant Logistics	0	0	6	0	3	NIL
2	19LG32A5	Documentation for Exports & Imports	0	0	6	0	3	NIL
3	19LG32C3	Apprenticeship - III	0	0	46	0	23	NIL

Name of the Programme: BB.A - LL.B

SNO	COURSE CODE	COURSE NAME	L	T	P	S	Cr.	Pre requisites
1	20UC1101L	General English and Legal Language (Engish - I)	1	0	4	0	3	NIL

2	20BL11C1	Principles of Management	3	1	0	0	4	NIL
3	20BL11C2	Business Environment	3	1	0	0	4	NIL
4	20BL11C3	Law of Contracts - I	3	1	0	0	4	NIL
5	20BL11C4	Introduction to Law and Legal system	3	1	0	0	4	NIL
6	20BL11C2	Introduction to I.T.	2	0	2	0	3	NIL
7	20UC2103L	Legal Professional Communication Skills (English – II)	1	0	4	0	3	NIL
8	20BL12C1	Human Resource Management	3	1	0	0	4	NIL
9	20BL12C2	Principles of Economics and Managerial Economics	3	1	0	0	4	NIL
10	20BL12C3	Sociology	3	1	0	0	4	NIL
11	20BL12C4	Law of Contracts – II	3	1	0	0	4	NIL
12	20BL12C5	Law of Torts	3	1	0	0	4	NIL
13	20BL12SI1	SIP- Industry: No Credits	0	0	0	0	0	NIL
14	20BL21C1	Marketing Management	3	1	0	0	4	NIL
15	20BL21C2	Macro Economics	3	1	0	0	4	NIL
16	20BL21C3	Financial and Cost Accountancy	3	1	0	0	4	NIL
17	20BL21C4	Constitutional Law - I	3	1	0	0	4	NIL
18	20BL21C5	Law of Crimes – I	3	1	0	0	4	NIL
19	20BL21C6	Family Law - I	3	1	0	0	4	NIL
20	20BL22C1	Management Accounting	3	1	0	0	4	NIL
21	20BL22C2	Management Information Systems	3	1	0	0	4	NIL
22	20BL22C3	Company Law	3	1	0	0	4	NIL
23	20BL22C4	Constitutional Law – II	3	1	0	0	4	NIL
24	20BL22C5	Jurisprudence	3	1	0	0	4	NIL
25	20BL22C6	Family Law - II	3	1	0	0	4	NIL
26	20BL22C7	Moot Court Training – I	1	0	2	0	2	NIL
27	20BL22SI2	Sip- Industry: 2 Credits	0	0	4	0	2	NIL
28	20BL31C1	Organizational Behavior	3	1	0	0	4	NIL
29	20BL31C2	Financial Management	3	1	0	0	4	NIL
30	20BL31C3	Code of Civil Procedure and Law of Limitation	3	1	0	0	4	NIL
31	20BL31C4	Law of crimes-II	3	1	0	0	4	NIL
32	20BL31C5	Law of Evidence	3	1	0	0	4	NIL
33	20BL31C6	Law of Property	3	1	0	0	4	NIL
34	20BL32C1	Quantitative Methods	3	1	0	0	4	NIL
35	20BL32C2	Administrative Law	3	1	0	0	4	NIL
36	20BL32C3	Labour Law - I	3	1	0	0	4	NIL
37	20BL32C4	Law of Banking and N.I. Act	3	1	0	0	4	NIL
38	20BL32C7	Moot Court Training - II	1	0	2	0	2	NIL
39	20BL32SI 3	Sip- Advocate/District Courts	0	0	4	0	2	NIL
40	20BL41C1	Intellectual Property Rights	3	1	0	0	4	NIL
41	20BL41C2	Law of Insurance	3	1	0	0	4	NIL
42	20BL41C3	Public International Law	3	1	0	0	4	NIL

43	20BL41C4	Labour Laws-II	3	1	0	0	4	NIL
44	20BL41C7	Soft Skills-1	1	0	4	0	3	NIL
45	20BL42C1	Corporate Law & Governance	3	1	0	0	4	NIL
46	20BL42C2	Law of Taxation	3	1	0	0	4	NIL
47	20BL42C3	Environmental Law	3	1	0	0	4	NIL
48	20BL42C6	Moot Court Training -III	1	0	2	0	2	NIL
49	20BL42C7	Soft Skills-2	1	0	4	0	3	NIL
50	20BL42SI 4	Sip- Advocate/District Courts	0	0	4	0	2	NIL
51	20BL51C1	Alternate Dispute Resolution	3	0	2	0	4	NIL
52	20BL51C2	Drafting, Pleading and Conveyance	2	0	4	0	4	NIL
53	20BL51C3	I.T. Offences & Cyber Law	3	1	0	0	4	NIL
54	20BL51C4	Aptitude for Advocacy - I	2	1	0	0	3	NIL
55	20BL51C7	Moot Court - IV	0	0	4	0	2	NIL
56	20BL52C1	Professional Ethics and Professional Accountancy system	2	0	4	0	4	NIL
57	20BL52C2	Aptitude for Advocacy - II	2	1	0	0	3	NIL
58	20BL52C3	Higher Judiciary (Theory)	2	1	0	0	3	NIL
59	20BL52C4	Higher Judiciary (Internship)	0	0	4	0	2	NIL
60	20BL52C5	Moot Court Exercise and Internship	0	0	8	0	4	NIL
Elective - 1								
1	20BL32C5	Women and Law	3	1	0	0	4	NIL
2	20BL32C6	Current Affairs and GS-1 (India History)	3	1	0	0	4	NIL
Elective - 2								
1	20BL41C5	Juvenile Justice	3	1	0	0	4	NIL
2	20BL41C6	Current Affairs and GS-2 (Political Science and Public Administration)	3	1	0	0	4	NIL
Elective - 3								
1	20BL42C4	Media Law and Right to Information	3	1	0	0	4	NIL
2	20BL42C5	Current Affairs and GS-3 (Geography and International Relations)	3	1	0	0	4	NIL
Elective - 4								
1	20BL51C5	Crimonology, Penology and Victimology	3	1	0	0	4	NIL
2	20BL51C6	Current Affairs and General Studies -4	3	1	0	0	4	NIL

Name of the Programme: BFA								
S.No	**Course code**	**Course Name**	**L**	**T**	**P**	**S**	**Cr**	**Pre requisites**
1	20UC1101	Integrated Professional English	0	0	4	0	2	Nill
2	20UC0009	Ecology and Environment	2	0	0	0	0	Nill
3	20FA1101	Digital Literacy	3	0	0	0	3	Nill
4	20FA1102	Fundamentals of Design	2	0	8	0	6	Nill
5	20FA1103	Story of Art	3	0	0	0	3	Nill

6	20FA1104	Drawing	1	0	10	0	6	Nill
7	20UC1202	English Proficiency	0	0	4	0	2	Nill
8	19GN11T1	Language – Telugu	2	0	0	0	2	Nill
9	19GN3054	French	2	0	0	0	2	Nill
10	20FA1201	Story of Art	3	0	0	0	3	Nill
11	20FA1202	Drawing	1	0	10	0	6	Nill
12	20FA1203	Fundamentals of Design	2	0	6	0	5	Nill
13	20UC0007	Indian Heritage & Culture	2	0	0	0	0	Nill
14	20FA1204	Introduction to Practical Filmmaking	3	0	0	0	3	Nill
15	20UC2103	Professional Communication Skills	0	0	4	0	2	Nill
16	20FA2101	Drawing	2	0	8	0	6	Nill
17	20FA2102	History of Art (Indian)	3	0	0	0	3	Nill
18	20UC3005	Aptitude Builder	0	0	4	0	2	Nill
19	20FA2201	Drawing	2	0	8	0	6	Nill
20	20FA2202	Museum Studies	2	0	0	0	2	Nill
21	20FA2202	History of Art (Western)	3	0	0	0	3	Nill
22	20FA3101	Aesthetics (Indian)	3	0	0	0	3	Nill
23	20FA3102	Drawing	2	0	8	0	6	Nill
24	20UC3205	Campus to Corporate	0	0	4	0	2	Nill
25	20FA3201	Aesthetics (Western)	3	0	0	0	3	Nill
26	20FA3202	Drawing	2	0	8	0	6	Nill
27	20FA4101	Modern and Contemporary Art in India	3	0	0	0	3	Nill
28	20FA4102	Drawing	2	0	8	0	6	Nill
29	20FA4103	Folk Art	3	0	0	0	3	Nill
30	20FA4201	Final Exhibition &Jury	8	0	0	0	8	Nill
31	19IE4051	Internship	0	0	0	24	6	Nill
32	20FA4203	Portfolio/Presentation	6	0	0	0	6	Nill
33	20UC3005	Aptitude Builder	0	0	4	0	2	Nill
34	20MM2201	Lighting & Camera	3	0	0	0	3	Nill
35	20MM2202	Sound & Special Effects	1	0	4	0	3	Nill
36	20MM2203	Visual Analysis Tools	3	0	0	0	3	Nill
37	20MM3101	Advertising Profession and Practice	1	0	6	0	4	Nill
38	20MM3102	Public Relations	3	0	0	0	3	Nill
39	20MM3103	Elements of Film	1	0	4	0	3	Nill
40	20UC3205	Campus to Corporate	0	0	4	0	2	Nill
41	20MM3201	Contemporary Media	1	0	6	0	4	Nill
42	20MM3202	Art & Aesthetics	3	0	0	0	3	Nill
43	20MM3203	Media Laws & Censorship	3	0	0	0	3	Nill
44	20MM4101	Digital Marketing	1	0	4	0	3	Nill
45	20MM4102	Reporting and Writing	1	0	4	0	4	Nill
46	20MM4103	Creative Communications	3	0	0	0	3	Nill
47	20MM4104	Audio and Video Production	3	0	0	0	3	Nill

48	19IE4051	Internship	0	0	0	24	6	Nill
49	20MM4202	Major Project	8	0	0	0	8	Nill
50	20MM4203	Portfolio/Presentation	6	0	0	0	6	Nill
Specialization - 1 (Painting)								
1	20FA2103	Painting	0	0	10	0	5	Nill
2	20FA2104	Composition	0	0	10	0	5	Nill
3	20FA2203	Painting	0	0	10	0	5	Nill
4	20FA2204	Composition	0	0	10	0	5	Nill
5	20FA3103	Painting	0	0	10	0	5	Nill
6	20FA3104	Composition	0	0	10	0	5	Nill
7	20FA3203	Painting	0	0	10	0	5	Nill
8	20FA3204	Composition	0	0	10	0	5	Nill
9	20FA4104	Painting	0	0	10	0	5	Nill
10	20FA4105	Composition	0	0	10	0	5	Nill
11	20FA2103	Painting	0	0	10	0	5	Nill
12	20FA4105	Composition	0	0	10	0	5	Nill
Specialization - 2 (Sculpture)								
1	20FA2105	Life Study	0	0	10	0	5	Nill
2	20FA2106	Composition (Sculpture)	0	0	10	0	5	Nill
3	20FA2205	Life Study	0	0	10	0	5	Nill
4	20FA2206	Composition (Sculpture)	0	0	10	0	5	Nill
5	20FA3105	Life Study	0	0	10	0	5	Nill
6	20FA3106	Composition (Sculpture)	0	0	10	0	5	Nill
7	20FA3205	Life Study	0	0	10	0	5	Nill
8	20FA3206	Composition (Sculpture)	0	0	10	0	5	Nill
9	20FA4106	Life Study	0	0	10	0	5	Nill
10	20FA4107	Composition (Sculpture)	0	0	10	0	5	Nill
11	20MM2101	Sketching	0	0	6	0	3	Nill
12	20MM2102	Graphic Design	1	0	6	0	4	Nill
13	20MM2103	Basics of Photography	1	0	4	0	3	Nill
Specialization - 3 (Animation)								
1	20MM2104	2D Animation	2	0	4	0	4	Nill
2	20MM2105	Introduction to 3D	1	0	6	0	4	Nill
3	20MM2204	Modeling	0	0	8	0	4	Nill
4	20MM2205	Texturing	0	0	8	0	4	Nill
5	20MM3104	Lighting & Rendering	0	0	8	0	4	Nill
6	20MM3105	Dynamics	0	0	8	0	4	Nill
7	20MM3204	Rigging & Animation	1	0	8	0	5	Nill
8	20MM3205	Advanced Character Animation – I	0	0	8	0	4	Nill
9	20MM4105	Advanced Character Animation-II	0	0	10	0	5	Nill

10	20MM4106	Advanced Post Production Tools	1	0	4	0	3	Nill
Specialization - 4 (Filmmaking)								
1	20MM2106	Principles of Cinematography	0	0	6	0	3	Nill
2	20MM2107	Introduction to Film Genres	0	0	6	0	3	Nill
3	20MM2206	Script Writing & Story Boarding	1	0	6	0	4	Nill
4	20MM2207	Intermediate Practical Film Making	0	0	8	0	4	Nill
5	20MM3106	Commercial Production Practical	0	0	8	0	4	Nill
6	20MM3107	Production Management	0	0	8	0	4	Nill
7	20MM3206	Practical Filmmaking	0	0	8	0	4	Nill
8	20MM3207	Fundamentals of Visual Effects and Composting	0	0	8	0	4	Nill
9	20MM4107	Advanced Practical in Film Making	0	0	8	0	4	Nill
10	20MM4108	Advanced Post Production Tools	0	0	8	0	4	Nill

Name of the Programme: B.A

SNO	COURSE CODE	COURSE NAME	L	T	P	S	Cr	Pre requisites
1	20UC1101	Integrated Professional English	0	0	4	0	2	Nill
2	19GN11T1	Telugu - 1	3	0	0	0	3	Nill
3	19GN11H1	Hindi - 1	3	0	0	0	3	Nill
4	19BA1101	Ancient Indian History	4	0	0	0	4	Nill
5	19BA1103	Introduction to Public Administration	4	0	0	0	4	Nill
6	20UC0010	Universal Human Values and Professional Ethics	2	0	0	0	0	Nill
7	20UC1202	English Proficiency	0	0	4	0	2	Nill
8	19GN12T2	Telugu - 2	3	0	0	0	3	Nill
9	19GN12H2	Hindi -2	3	0	0	0	3	Nill
10	19BA1201	Medieval Indian History	4	0	0	0	4	Nill
11	19BA1203	Administrative Theory	4	0	0	0	4	Nill
12	20UC0008	Indian Constitution	2	0	0	0	0	Nill
13	19UC2103	Professional Communication	0	0	4	0	4	Nill
14	19GN21T3	Telugu - 3	3	0	0	0	3	Nill
15	19GN21H3	Hindi -3	3	0	0	0	3	Nill
16	19BA2101	Indian History & Culture 1526 - 1857	4	0	0	0	4	Nill
17	19BA2103	Union Administration	4	0	0	0	4	Nill
18	20UC2103	Professional Communication Skills	0	0	4	0	2	Nill

19	19GN2201	Data Interpretation	2	0	2	0	3	Nill
20	19BA2201	History of Modern India 1858-1947	4	0	0	0	4	Nill
21	19BA2203	State and Local Administration	4	0	0	0	4	Nill
22	20UC2204	Aptitude Builder	2	0	0	0	2	Nill
23	19GN3102	International Relations	3	0	0	0	3	Nill
24	20UC0009	Ecology & Environment	2	0	0	0	0	Nill
25	19GN3201	Project Work	0	0	12	0	6	Nill
26	19UC3206	Campus to Corporate	2	0	0	0	2	Nill
27	19BA1102	Physical Geography	4	0	0	0	4	Nill
28	18BA1102	Essentials of Micro Economics						Nill
29	20BA1104	Telugu Classical Poetry						Nill
30	18BA1105	Introduction to English Language and Literature						Nill
31	19BA1202	Human Geography	4	0	0	0	4	Nill
32	18BA1202	Essentials of Micro Economics						Nill
33	20BA1204	Modern Telugu Poetry						Nill
34	18BA1205	English Literature in Context-I (1500-1620)						Nill
35	19BA2102	Physical & Industrial Geography of India	4	0	0	0	4	Nill
36	16BA2102	Indian Economy-Problems &Policies						Nill
37	20BA2104	Kavyamu,Prabandha and sataka Litt.						Nill
38	18BA2105	English Literature in Context-II (1620-1850)						Nill
39	19BA2202	Social Geography of India	4	0	0	0	4	Nill
40	16BA2202	Economic Development and Planning						Nill
41	20BA2204	Telugu Novel , Drama &Letters						Nill
42	18BA2205	English Literature in Context-III(1820-1950)						Nill
43	19BA3101	History of Modern World	4	0	0	0	4	Nill
44	19BA3102	History of East Asia (From 19th Century A.D. to 1950 A.D.)						Nill
45	16BA3102	International Economic Order	4	0	0	0	4	Nill

46	19BA3103	Contemporary Issues in Geography						Nill
47	19BA3104	Remote Sensing and Geographic Information System						Nill
48	20BA3104	History of Traditional Literature						Nill
49	18BA3105	English Literature in Context(Post-Modern Age)						Nill
50	19BA3105	Social Policies and Programmes in India	4	0	0	0	4	Nill
51	19BA3106	E-Governance						Nill
52	19BA3201	History and Culture of Andhra Pradesh	4	0	0	0	4	Nill
53	19BA3202	Archeology						Nill
54	19BA3203	Regional Geography of India	4	0	0	0	4	Nill
55	16BA3205	Public Finance						Nill
56	20BA3204	History of Modern Literature						Nill
57	20BA3205	Dialectology,Syntax and Translation						Nill
58	18BA3210	Academic Research-Dissertation						Nill
59	18BA3211	Academic Research-Publications & Book Reviews						Nill
60	19BA3205	Indian Polity and Governance	4	0	0	0	4	Nill
61	19BA3206	Disaster Management						Nill

Name of the Programme: LL.B

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	20LL11C1	Law of Contract-I	3	1	0	0	4	NIL
2	20LL11C2	Constitutional Law-I	3	1	0	0	4	NIL
3	20LL11C3	Family Law -I	3	1	0	0	4	NIL
4	20LL11C4	Law of Crimes – I	3	1	0	0	4	NIL
5	20LL11C5	Law of Tort, MVA & CP Act	3	1	0	0	4	NIL
6	20UC1101L	Soft Skills-I	1	0	4	0	3	NIL
7	20LL12C1	Special Contract-II	3	1	0	0	4	NIL
8	20LL12C2	Constitutional Law- II	3	1	0	0	4	NIL
9	20LL12C 3	Family Law -II	3	1	0	0	4	NIL
10	20LL12C 4	Administrative Law	3	1	0	0	4	NIL
11	20LL12C 5	Law of banking and N.I Act	3	1	0	0	4	NIL
12	20LL12C 6	Soft Skills-Ii	1	0	4	0	3	NIL

13	20LL12SII	SIP(Advocate Chambers, District Level Courts)	0	0	4	0	2	NIL
14	20LL21C 1	Labour law-I	3	1	0	0	4	NIL
15	20LL21C 2	Civil Procedure Code and Limitation Act	3	1	0	0	4	NIL
16	20LL21C 3	Law of Crimes-II: Cr.P.C	3	1	0	0	4	NIL
17	20LL21C 4	Law of Evidence	3	1	0	0	4	NIL
18	20LL21C 5	Jurisprudence & Interpretation of Statutes	3	1	0	0	4	NIL
19	20LL21C 6	Women and Law	3	1	0	0	4	NIL
20	20LL22C 1	Labour law-II	3	1	0	0	4	NIL
21	20LL22C 2	Company Law	3	1	0	0	4	NIL
22	20LL22C 3	Environmental Law	3	1	0	0	4	NIL
23	20LL22C 4	Property Law	3	1	0	0	4	NIL
24	20LL22C 5	Cyber Law & IPR	3	1	0	0	4	NIL
25	20LL22C 6	Juvenile Justice	2	1	0	0	3	NIL
26	20LL22C 7	Moot Court Training-I	0	0	2	0	1	NIL
27	20LL22SI-II	SIP to High Court	0	0	4	0	2	NIL
28	20LL21C 0	Public International Law (C)	3	1	0	0	4	NIL
29	20LL31C 1	Principles of Taxation Law (C)	3	1	0	0	4	NIL
30	20LL31C 2	Media Laws & RTI Act (O)	3	1	0	0	4	NIL
31	20LL31C 3	Law of insurance (O)	3	1	0	0	4	NIL
32	20LL31C 4	Moot Court Training – II (CL)	1	0	2	0	3	NIL
33	20LL31C 5	Seminar – I(O)	1	1	0	0	2	NIL
34	20LL32C 0	Criminology, Penology and Victimology (O)	3	1	0	0	4	NIL
35	20LL32C 1	Alternate Dispute Resolution (CL)	3	0	2	0	4	NIL
36	20LL32C 2	Professional Ethics & Professional Accounting system (CL)	2	0	4	0	4	NIL
37	20LL32C 3	Drafting, Pleading and Conveyance (CL)	2	0	4	0	4	NIL
38	20LL32C 4	Moot court exercise and Internship (CL)	0	0	8	0	4	NIL
39	20LL32C 5	Higher Judiciary (Theory and Practice) (CL)	2	0	4	0	4	NIL
40	20LL32C 6	Seminar – II (O)	1	1	0	0	2	NIL

Name of the Programme: B.Sc Travel & Tourism

SNO	COURSE CODE	COURSE NAME	L	T	P	S	Cr	Pre-requisites
1	20TT11E1	English for Business Communication skills	1	0	4	0	3	Nill
2	20TT11K1	Business Mathematics	3	1	0	0	4	Nill
3	20TT11U1	Human values & Professional Ethics	3	0	0	0	3	Nill
4	20TT11C1	Introduction to Tourism management	3	0	0	0	3	Nill
5	20TT11C2	Hospitality and Accommodation Management	3	0	2	0	4	Nill
6	20TT11F1	Foreign Language – Part I	3	0	0	0	3	Nill
7	20TT12K1	Business Accounting	3	1	0	0	4	Nill
8	20TT12C1	Food & Beverage Production operations	2	0	4	0	4	Nill
9	20TT12C2	Strategic Planning	3	0	0	0	3	Nill

10	20TT12I1	Management Information Systems	3	0	2	0	4	Nill
11	20TT12K1	Food safety: hygiene and principles	3	0	0	0	3	Nill
12	20TT12F2	Foreign language Part – II	3	0	0	0	3	Nill
13	20TT12E2	English for Business writing skills	1	0	4	0	3	Nill
14	20TT21K1	Principles of Nutrition Science	3	0	0	0	3	Nill
15	20TT21K2	Human Resources Management	3	0	0	0	3	Nill
16	20TT21K3	Customer Relationship Management	3	0	0	0	3	Nill
17	20TT21C1	Tourism Economics and Analytics	3	0	0	0	3	Nill
18	20TT21R1	Research Methodology	2	0	4	0	4	Nill
19	20TT12N1	Internship – I (2 Months)	0	0	18	0	9	Nill
20	20TT22K1	Services Marketing	3	0	0	0	3	Nill
21	20TT22K2	Business Statistics	3	1	0	0	4	Nill
22	20TT22C1	Air Ticketing and Cargo Management	2	0	4	0	4	Nill
23	20TT22C2	Eco Tourism	3	0	0	0	3	Nill
24	20TT22C3	Tourism Planning and Destination management	2	0	4	0	4	Nill
25	20TT22C4	Medical and Adventure Tourism	2	0	4	0	4	Nill
26	20TT31C5	Travel agency operations	2	0	2	0	3	Nill
27	20TT31C2	Tourism Laws	3	0	0	0	3	Nill
28	20TT31C3	Hotel contracting &costing	2	0	2	0	3	Nill
29	20TT31K1	International Digital Marketing	2	0	2	0	3	Nill
30	20TT31C4	Total Quality Management in Travel and Tourism	3	0	0	0	3	Nill
31	20TT31C5	Tourism operations	3	0	0	0	3	Nill
32	20TT22N2	Internship – II (2 Months)	0	0	18	0	9	Nill
33	20TT32N0	Industrial Internship (4 Months)	0	0	36	0	18	Nill

2020-21 Course Structure for M.Tech. - BIOTECHNOLOGY							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	19BT5101	Mathematics and Biostatistics	3	2	0	0	4
2	19BT5102	Biochemical Engineering	3	0	2	0	4
3	19BT5103	Molecular Biology and r-DNA Technology	3	0	2	0	4
4	19BT5104	Applied Bioinformatics	3	0	2	0	4
5		Elective -1	3	0	0	0	3
6		Elective -2	3	0	0	0	3
7	19IE5149	Seminar	0	0	4	0	2
Total			**18**	**2**	**10**	**0**	**24**
S E M E S T E R - 2							
1	19BT5105	Plant and Animal Biotechnology	3	0	2	0	4
2	19BT5106	Immuno technology	3	0	2	0	4

3	19BT5107	Bioreactor modeling and Simulation	3	2	0	0	4
4	19BT5108	Downstream Processing	3	0	2	0	4
5		Elective -3	3	0	0	0	3
6		Elective -4	3	0	0	0	3
7	18IE5250	Termpaper	0	0	4	0	2
Total			**18**	**2**	**10**	**0**	**24**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total			**0**	**0**	**72**	**0**	**36**
Total Credits:							**84**
ELECTIVES COURSES							
Elective -1							
1	19BT51A1	Protein Engineering	3	0	0	0	3
2	19BT51A2	Enzyme Technology	3	0	0	0	3
3	19BT51A3	Medical Biotechnology	3	0	0	0	3
4	19BT51A4	Stem cell technology	3	0	0	0	3
5	19BT51A5	Molecular Modeling and Drug Design	3	0	0	0	3
Elective - 2							
1	19BT51B1	Food Technology	3	0	0	0	3
2	19BT51B2	Transport phenomenon in bioprocess	3	0	0	0	3
3	19BT51B3	Biomining	3	0	0	0	3
4	19BT51B4	Bioprocess validation and cGMP	3	0	0	0	3
Elective -3							
1	19BT51C1	Perl programming and Bioperl	3	0	0	0	3
2	19BT51C2	Bioprocess Technology	3	0	0	0	3
3	19BT51C3	Environmental Biotechnology	3	0	0	0	3
4	19BT51C4	Nano Technology	3	0	0	0	3
5	19BT51C5	IPR and Patent Laws	3	0	0	0	3
Elective - 4							
1	19BT51D1	Regulatory affairs & Clinical trials	3	0	0	0	3
2	19BT51D2	Bioprocess economics and plant design	3	0	0	0	3
3	19BT51D3	Genomics and Proteomics	3	0	0	0	3
4	19BT51D4	Bio catalysis and enzyme	3	0	0	0	3

2020-21 Course Structure for M.Tech - STRUCTURAL ENGINEERING							
S E M E S T E R - 1							
S No	**Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	20CE5101	Advanced Mechanics of Solids	3	1	0	0	4
2	20CE5102	Advanced Prestressed Concrete Design	3	1	0	0	4

3	20CE5103	Advanced Concrete Technology	3	0	2	0	4
4	20CE5104	Structural Dynamics	3	0	2	0	4
5		Elective-1	3	0	0	0	3
6		Elective-2	3	0	0	0	3
7	20IE5149	Seminar	0	0	4	0	2
	Total						24
S E M E S T E R - 2							
1	20CE5205	Theory of Plates and Shells	3	1	0	0	4
2	20CE5206	Finite Element Analysis	3	0	2	0	4
3	20CE5207	Bridge Engineering	3	1	0	0	4
4	20CE5208	Earthquake resistant design of structures	3	0	2	0	4
5		Elective-3	3	0	0	0	3
6		Elective-4	3	0	0	0	3
7	20IE 5250	Term paper	0	0	4	0	2
Total			**18**	**2**	**8**	**0**	**24**
S E M E S T E R - 3 & 4							
1	20IE6050	Dissertation / Practise School	0	0	72	0	36
Total Credits:							**84**
ELECTIVES COURSES							
Elective-1							
1	20CE51A1	Pre-Engineered Structures	3	0	0	0	3
2	20CE51A2	Design of Offshore structures	3	0	0	0	3
Elective-2							
1	20CE51B1	Design & Detailing of RC Structures	3	0	0	0	3
2	20CE51B2	Repair and Rehabilitation of structures	3	0	0	0	3
Elective-3							
1	20CE52C1	Fracture Mechanics	3	0	0	0	3
2	20CE52C2	Design of Tall Structures	3	0	0	0	3
Elective-4							
1	20CE52D1	Green Buildings	3	0	0	0	3
2	20CE52D2	Stability of structures	3	0	0	0	3

2020-21 Course Structure for M.Tech - CONSTRUCTION TECHNOLOGY AND MANAGEMENT

S E M E S T E R - 1

S.No	Course Code	Course Title	L	T	P	S	Cr
1	20CE5121	Construction Planning Scheduling and Control	3	0	2	0	4
2	20CE5122	Sustainable Construction Materials and Methods	3	0	2	0	4
3	20CE5123	Lean Construction Practices	3	1	0	0	4

4	20CE5124	Building Information Modeling	3	0	2	0	4
5		Elective 1	3	0	0	0	3
6		Elective 2	3	0	0	0	3
7	20IE5148	Seminar	0	0	4	0	2
	Total						24
S E M E S T E R - 2							
1	20CE5225	Mechanized Construction and Machinery	3	0	2	0	4
2	20CE5226	Project Formulation Appraisal	3	1	0	0	4
3	20CE5227	Construction Laws and Regulations	3	1	0	0	4
4	20CE5228	Quality Management and Safety Management Systems in Construction	3	0	2	0	4
5		Elective 3	3	0	0	0	3
6		Elective 4	3	0	0	0	3
7	20IE5249	Term Paper	0	0	4	0	2
Total							24
S E M E S T E R - 3 & 4							
1	20IE6050	Dissertation	0	0	72	0	36
Total Credits:							**84**
ELECTIVES COURSES							
Elective-1							
1	20CE51E1	Material Procurement Management	3	0	0	0	3
2	20CE51E2	Green Buildings	3	0	0	0	3
Elective-2							
1	20CE51F1	Construction Personnel Management	3	0	0	0	3
2	20CE51F2	Pre-Engineering Construction and Technology	3	0	0	0	3
Elective-3							
1	20CE52G1	Statistical Methods in Construction	3	0	0	0	3
2	20CE52G2	Project Risk Management	3	0	0	0	3
Elective-4							
1	20CE52H1	Emerging Construction Technologies	3	0	0	0	3
2	20CE52H2	Resource Management and Control in Construction	3	0	0	0	3

2020-21 Course Structure for M.Tech - GEO TECHNICAL ENGINEERING							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	20CE5161	Advanced Soil Mechanics	3	0	2	0	4
2	20CE5162	Sub-surface Investigations	3	0	2	0	4
3	20CE5163	Geo-environmental Engineering	3	0	2	0	4
4	20CE5164	Ground Improvement Techniques	3	0	2	0	4

5		Elective 1	3	0	0	0	3
6		Elective 2	3	0	0	0	3
7	20CE5148	Seminar	0	0	4	0	2
	Total						24
S E M E S T E R - 2							
1	20CE5265	Soil Dynamics & Geotechnical Earthquake Engineering	3	0	2	0	4
2	20CE5266	Geo Synthetics and Design of Retaining Walls	3	0	2	0	4
3	20CE5267	Design of Earth & Earth retaining structures	3	0	2	0	4
4	20CE5268	Advanced Foundation Engineering	3	0	2	0	4
5		Elective 3	3	0	0	0	3
6		Elective 4	3	0	0	0	3
7	20IE5249	Term Paper	0	0	4	0	2
Total							24
S E M E S T E R - 3 & 4							
1	20IE6050	Dissertation	0	0	72	0	36
Total Credits:							**84**
ELECTIVES COURSES							
Elective-1							
1	20CE51M1	Soil structure interaction	3	0	0	0	3
2	20CE51M2	Finite Element Methods	3	0	0	0	3
Elective-2							
1	20CE51N1	Stability Analysis of Slopes	3	0	0	0	3
2	20CE51N2	Design of Highways and Airfield pavements	3	0	0	0	3
Elective-3							
1	20CE52O1	Rock Mechanics and Tunneling	3	0	0	0	3
2	20CE52O2	Offshore Geotechnical engineering	3	0	0	0	3
Elective-4							
1	20CE52P1	RS & GIS Applications in Civil Engineering	3	0	0	0	3
2	20CE52P2	Constitutive Modelling in Geotechnics	3	0	0	0	3

2020-21 Course Structure for M.TECH - COMPUTER SCIENCE & ENGINEERING

S E M E S T E R - 1

S.No	Course Code	Course Title	L	T	P	S	Cr
1	18 CS 5101	Mathematical Foundations of Computer Science	3	2	0	0	4
2	18 CS 5102	Computer Organization & Architecture	3	2	0	0	4
3	18 CS 5103	Data Structures & Algorithms	3	0	2	0	4
4	18 CS5104	Distributed Database Management System	3	0	2	0	4
5		Elective –I	3	0	0	0	3

6		Elective -II	3	0	0	0	3
7	18 IE 5149	Seminar	0	0	4	0	2
		Total	**18**	**4**	**8**	0	**24**
S E M E S T E R - 2							
1	18 CS 5205	Operating System Design	3	2	0	0	4
2	18 CS 5206	Computer Networks & Security	3	2	0	0	4
3	18 CS 5207	Object Oriented Analysis and Design	3	0	2	0	4
4	18 CS 5208	Enterprise Programming	3	0	2	0	4
5		Elective – III	3	0	0	0	3
6		Elective - IV	3	0	0	0	3
7	18 IE 5250	Term Paper	0	0	4	0	2
Total			**18**	**4**	**8**	0	**24**
S E M E S T E R - 3 & 4							
1	18 IE 6050	Dissertation	0	0	72	0	36
Total Credits:							**84**
ELECTIVES COURSES							
Elective-1							
1	18 CS 51A1	Soft Computing	3	0	0	0	3
2	18 CS 51A5	Machine Learning(Elective-1)	3	0	0	0	3
3	18 CS 51A3	Data Mining	3	0	0	0	3
4	18 CS 51A4	Natural Language Processing	3	0	0	0	3
Elective-2							
1	18 CS 51B1	Requirements Engineering	3	0	0	0	3
2	18 CS 51B2	Principles of Programming Languages	3	0	0	0	3
3	18 CS 51B3	Compiler Design	3	0	0	0	3
4	18 CS 51B5	Software Verification & Validation	3	0	0	0	3
Elective-3							
1	18 CS 52C1	Cryptography & Network Security	3	0	0	0	3
2	18 CS 52C2	Mobile computing	3	0	0	0	3
3	18 CS 52C3	High Performance Computing	3	0	0	0	3
4	18 CS 52C4	Network management Systems	3	0	0	0	3
Elective-4							
1	18 CS 52D1	Service Oriented Architecture	3	0	0	0	3
2	18 CS 52D2	Visual Programming	3	0	0	0	3
3	18 CS 52D3	Digital Image Processing	3	0	0	0	3
4	18 CS 52D4	Big Data Analytics	3	0	0	0	3

2020-21 Course Structure for M.TECH- MACHINE LEARNING AND COMPUTING							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18 CS5109	Optimization Techniques	3	0	0	0	3
2	18 CS5110	Applied Statistics	3	0	0	0	3
3	18CS5117	Data warehousing & Mining	3	0	2	0	4
4	18 CS5112	Matrix Computation	3	0	2	0	4
5		Elective – I	3	0	0	0	3
6		Elective – II	3	0	0	0	3
7	18 IE5149	Seminar	0	0	4	0	2
		Total	**18**	**0**	**8**	0	**22**
S E M E S T E R - 2							
1	18 CS5113	Evolutionary and Natural Computing	3	0	2	0	4
2	18 CS5114	Discrete Mathematics	3	0	0	0	3
3	18 CS5115	Pattern Recognition and Machine Learning	3	0	2	0	4
4	18 CS5116	Computer Modeling & Simulation	3	0	2	0	4
5		Elective –III	3	0	0	0	3
6		Elective - IV	3	0	0	0	3
7	18 IE 5250	Term Paper	0	0	4	0	2
		Total	**18**	**0**	**10**	0	**23**
S E M E S T E R - 3 & 4							
1	18 IE 6050	Dissertation	0	0	72	0	36
Total Credits:							**81**
ELECTIVES COURSES							
Elective-1							
1	18 CS51E1	Computer Vision and Image Processing	3	0	0	0	3
2	18 CS51E2	Service Oriented Architecture	3	0	0	0	3
3	18 CS51E3	Data Analysis	3	0	0	0	3
4	18 CS51E4	Cloud Computing	3	0	0	0	3
Elective-2							
1	18 CS51F1	Artificial Neural Networks	3	0	0	0	3
2	18 CS51F2	Application Development Frameworks	3	0	0	0	3
3	18 CS51F3	Big Data Analytics	3	0	0	0	3
4	18 CS51F4	Cloud Security	3	0	0	0	3
Elective-3							
1	18 CS52G1	Control Theory	3	0	0	0	3
2	18 CS52G2	Web Semantics	3	0	0	0	3
3	18 CS52G3	Map Reduce Design Patterns	3	0	0	0	3
4	18 CS52G4	Data Centre Virtualization	3	0	0	0	3

Elective-4							
1	18 CS52H1	Reinforcement Learning	3	0	0	0	3
2	18 CS52H2	Multi Agent Systems	3	0	0	0	3
3	18 CS52H3	Network Security	3	0	0	0	3
4	18 CS52H4	Cloud Application Architectures	3	0	0	0	3

2020-21 Course Structure for M.TECH - DIGITAL FORENSIC&CYBER SECURITY							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18CS5117	Introduction to Cyber Security & ICS	3	0	2	0	4
2	18 CS 5118	Digital Forensics	3	0	2	0	4
3	18 CS 5119	Advance Network Security & Investigations	3	0	2	0	4
4	18 CS 5120	Software Security	3	0	2	0	4
5		Elective – I	3	0	0	0	3
6		Elective – II	3	0	0	0	3
7	18 IE 5149	Seminar	0	0	4	0	2
		Total	**18**	**4**	**8**	0	**24**
S E M E S T E R - 2							
1	18CS5221	Cryptography for Cyber Defense	3	0	2	0	4
2	18CS5222	Malware Analysis & Reverse Engineering	3	0	2	0	4
3	18CS5223	Cyber Incident Response & Resilience	3	0	2	0	4
4	18CS5224	Cyber Law, Governance & Compliance	3	0	2	0	4
5		Elective –III	3	0	0	0	3
6		Elective – IV	3	0	0	0	3
7	18IE5250	Term Paper	0	0	4	0	2
		Total	**18**	**4**	**8**	0	**24**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation	0	0	72	0	36
Total Credits:							**84**
ELECTIVES COURSES							
Elective-1							
1	18CS51I1	Mobile Device Threats & Investigation	3	0	0	0	3
2	18CS51I2	Fundamentals of E-Discovery	3	0	0	0	3
3	18CS51I3	Fuzzy sets and Fuzzy Logic	3	0	0	0	3
Elective-2							
1	18CS51J1	Introduction to Big Data Analytics	3	0	0	0	3
2	18CS51J2	Social Media Forensics	3	0	0	0	3
3	18CS51J3	Critical Information Infrastructure Security	3	0	0	0	3

Elective-3							
1	18CS52K1	Infrastructure Attacks and Defense	3	0	0	0	3
2	18CS52K2	Software Vulnerability Analysis and Resilience	3	0	0	0	3
3	18CS52K3	Parallel & Cloud Computing	3	0	0	0	3
Elective-4							
1	18CS52L1	Applied Cryptography and Steganography	3	0	0	0	3
2	18CS52L2	Software Modeling	3	0	0	0	3
3	18CS52L3	Digital Image Processing	3	0	0	0	3

2020-21 Course Structure for M. Tech - Radar & Communication							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	20 EC 5101	Modern Digital and Wireless Communication	3	1	2	0	5
2	20 EC 5102	Microwave and Millimetric wave Circuits	3	1	2	0	5
3	20 EC 5103	RADAR Engineering & mm Radar	3	0	0	0	3
4	20 EC 5104	RF System and Antenna Design	3	1	0	0	4
5		Elective – 1	3	0	0	0	3
6		Elective - 2	3	0	0	0	3
7	20 IE 5149	Seminar	0	0	4	0	2
8	20 TS 5101	Technical Skilling-I (MatLab*, AWR*)	0	0	0	8	2
TOTAL			**18**	**3**	**8**	**6**	**27**
S E M E S T E R - 2							
1	20 EC 5205	4G, 5G, and Modern Wireless Technologies	3	1	2	0	5
2	20 EC 5206	Advanced Communication Systems & Networks	3	0	2	0	4
3	20 EC 5207	Modern Radar Systems and Autonomous Vechicles	3	1	0	0	4
4	20 EC 5208	Optical Networks & Satellite Communications	3	0	0	0	3
5		Elective – 3	3	0	0	2	3.5
6		Elective - 4	3	0	0	2	3.5
7	20 IE 5250	Term Paper	0	0	4	0	2
8	20 TS 5102	Technical Skilling-II (MatLab*, AWR*)	0	0	0	8	2
TOTAL			**18**	**2**	**8**	**10**	**27**
S E M E S T E R - 3 & 4							
1	20 IE 6050	Dissertation	0	0	72	0	36
TOTAL CREDITS							**90**
ELECTIVES COURSES							
			Periods				

S. No.	COURSE CODE	Course Title	L	T	P	S	Credits
ELECTIVE-1							
1	20 EC 51A1	Next Generation Networking & Communication Technologies	3	0	0	0	3
2	20 EC 51A2	Microwave Semi Conductor Devices	3	0	0	0	3
3	20 EC 51A3	Smart Antennas	3	0	0	0	3
4	20 EC 51A4	Embedded Systems & VLSI for Wireless Communication	3	0	0	0	3
ELECTIVE-2							
1	20 EC 51B1	Phased Array Systems	3	0	0	0	3
2	20 EC 51B2	GPS & Global Navigation Satellite System	3	0	0	0	3
3	20 EC 51B3	EMI/EMC & Electronic Warfare	3	0	0	0	3
4	20 EC 51B4	Deep learning with Artificial Intelligence	3	0	0	0	3
ELECTIVE-3							
1	20 EC 52C1	Estimation & Detection Theory	3	0	0	0	3
2	20 EC 52C2	Radar Signal Processing & System	3	0	0	0	3
3	20 EC 52C3	High Performance Communication Networking	3	0	0	0	3
4	20 EC 52C4	Cryptography & Networking Security	3	0	0	0	3
ELECTIVE-4							
1	20 EC 52D1	Machine Learning & Soft Computing Applications in Communication	3	0	0	0	3
2	20 EC 52D2	Cloud Computing & Cyber Security	3	0	0	0	3
3	20 EC 52D3	Remote Sensing & Sensors	3	0	0	0	3
4	20 EC 52D4	Automotive Electronics & Avionics	3	0	0	0	3

2020-21 Course Structure for M. Tech - VLSI

S E M E S T E R - 1

S.No	Course Code	Course Title	L	T	P	S	Cr
1	20 EC 5128	MOS Circuit Design	3	1	2	0	5
2	20 EC 5129	Analog IC Design & Design for Testability	2	2	2	0	5
3	20 EC 5130	ASIC & FPGA Design	3	0	2	0	4
4	20 EC 5131	IC Fabrication Technology	3	0	0	0	3
5		Elective – 1	3	0	0	0	3
6		Elective - 2	3	0	0	0	3
7	20 IE 5149	Seminar	0	0	4	0	2
8	20 TS 5101	Technical Skilling-I (HDL)	0	0	0	8	2
Total			**17**	**3**	**10**	**8**	**27**

S E M E S T E R - 2

1	20 EC 5232	RF IC Design & Introduction to mm RADAR	3	1	2	0	5
2	20 EC 5233	Low power VLSI System Design	3	0	2	0	4
3	20 EC 5234	Algorithm for VLSI Design Automation	3	1	2	0	5
4	20 EC 5235	Testing of VLSI Circuits	3	0	0	0	3
5		Elective – 3	3	0	0	0	3
6		Elective - 4	3	0	0	0	3
7	20 IE 5250	Term Paper	0	0	4	0	2
8	20 TS 5102	Technical Skilling-II (Design for Testability)	0	0	0	8	2
Total			**18**	**2**	**10**	**8**	**27**
S E M E S T E R - 3 & 4							
1	20 IE 6050	Dissertation	0	0	72	0	36
Total Credits							**90**
ELECTIVES COURSES							
Elective-1							
1	20 EC 51Q1	Embedded System Design	3	0	0	0	3
2	20 EC 51Q2	VLSI Signal Processing	3	0	0	0	3
3	20 EC 51Q3	CMOS Mixed Signal Circuits	3	0	0	0	3
4	20 EC 51Q4	Nano Electronics	3	0	0	0	3
5	20 EC 51Q5	CAD Tools for VLSI	3	0	0	0	3
Elective-2							
1	20 EC 51R1	Deep learning with Artificial Intelligence	3	0	0	0	3
2	20 EC 51R2	Bi-CMOS Technology & Applications	3	0	0	0	3
3	20 EC 51R3	Semiconductor Device Modeling	3	0	0	0	3
4	20 EC 51R4	Memory Design and Testing	3	0	0	0	3
5	20 EC 51R5	VLSI Circuits for Biomedical Applications	3	0	0	0	3
Elective-3							
1	20 EC 52S1	System on Chip Design	3	0	0	0	3
2	20 EC 52S2	VLSI Data Converters	3	0	0	0	3
3	20 EC 52S3	MEMS System Design	3	0	0	0	3
4	20 EC 52S4	VLSI for Wireless Communication	3	0	0	0	3
5	20 EC 52S5	Reconfigurable Computing	3	0	0	0	3
Elective-4							
1	20 EC 52T1	Optimization Techniques and Applications in VLSI Design	3	0	0	0	3
2	20 EC 52T2	Advanced Digital IC Design	3	0	0	0	3
3	20 EC 52T3	Network on Chip	3	0	0	0	3
4	20 EC 52T4	Cryptography and Network Security	3	0	0	0	3
5	20 EC 52T5	Advanced Computer Architecture Design	3	0	0	0	3

2020-21 Course Structure for M.TECH - POWER SYSTEMS							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18EE5101	Power System Dynamics & stability	3	1	0	0	4
2	18EE5102	Advanced Power System Analysis	3	1	2	0	5
3	18EE5103	Deregulated Operation of Power Systems	3	1	0	0	4
4	18EE5104	Modern Control Theory	3	1	0	0	4
5		Elective –I	3	0	0	0	3
6		Elective – II	3	0	0	0	3
7	18IE5149	Seminar	0	0	4	0	2
			18	**4**	**6**	**0**	**25**
S E M E S T E R - 2							
1	18EE5205	Real Time Control of Power System	3	1	2	0	5
2	18EE5206	AI Techniques in Power Systems	3	1	0	0	4
3	18EE5207	Smart Grids Technologies	3	1	0	0	4
4	18EE5208	Digital Protection of Power Systems	3	1	0	0	4
5		Elective –III	3	0	0	0	3
6		Elective - IV	3	0	0	0	3
7	18IE5250	Term Paper	0	0	4	0	2
Total			**18**	**4**	**6**	**0**	**25**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total Credits							**86**
ELECTIVES COURSES							
Elective-1							
1	18EE51A1	Reactive Power Compensation & Management	3	0	0	0	3
2	18EE51A2	Distribution System Planning & Automation	3	0	0	0	3
3	18EE51A3	Power System Reliability	3	0	0	0	3
Elective-2							
6	18EE51B1	Alternate Sources of Electrical Energy	3	0	0	0	3
7	18EE51B2	Digital Signal Processors and Applications	3	0	0	0	3
8	18EE51B3	Optimization Techniques	3	0	0	0	3
Elective-3							
10	18EE52C1	FACTS	3	0	0	0	3
11	18EE52C2	Energy Conservation & Audit	3	0	0	0	3
12	18EE52C3	Adaptive Control Systems	3	0	0	0	3
Elective-4							
15	18EE52D1	EHVAC & HVDC Transmission	3	0	0	0	3
16	18EE52D2	Power Quality	3	0	0	0	3

17	18EE52D3	Integration of Energy Sources	3	0	0	0	3

2020-21 Course Structure for M.TECH - POWER ELECTRONICS AND DRIVES							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18EE509	Modeling and Analysis of Electrical machines	3	1	0	0	4
2	18EE510	Analysis of Power Converters	3	1	2	0	5
3	18EE5111	Electrical Drives	3	1	0	0	4
4	18EE5112	Modern Control Theory	3	1	0	0	4
5		Elective –2	3	0	0	0	3
6		Elective – 2	3	0	0	0	3
7	18IE5149	Seminar	0	0	4	0	2
			18	**2**	**4**	**0**	**25**
S E M E S T E R - 2							
1	18EE5113	Advanced Power Converters	3	1	2	0	5
2	18EE5114	Advanced Electrical Drives	3	1	0	0	4
3	18EE5115	Smart Grid Technologies	3	1	0	0	4
4	18EE5116	FPGA controllers and Applications	3	1	0	0	4
5		Elective – 3	3	0	0	0	3
6		Elective - 4	3	0	0	0	3
7	18IE5150	Term Paper	0	0	4	0	2
Total			**18**	**2**	**4**	**0**	**25**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total Credits							**86**
ELECTIVES COURSES							
Elective-1							
1	18EE51E1	Microcontrollers and Applications	3	0	0	0	3
2	18EE51E2	Digital Simulation of Power Electronic Systems	3	0	0	0	3
3	18EE51E3	Industrial Control Electronics	3	0	0	0	3
Elective-2							
6	18EE51F1	Soft Computing Techniques	3	0	0	0	3
7	18EE51F2	Digital Signal Processor and Applications	3	0	0	0	3
8	18EE51F3	Optimization Techniques	3	0	0	0	3
Elective-3							
10	18EE52G1	FACTS Devices	3	0	0	0	3
11	18EE52G2	Electric and Hybrid Vehicles	3	0	0	0	3
12	18EE52G3	Adaptive Control Systems	3	0	0	0	3

Elective-4							
15	18EE52H1	EHVAC & HVDC Transmission	3	0	0	0	3
16	18EE52H2	Power Quality	3	0	0	0	3
17	18EE52H3	Power Electronics for Renewable Energy Systems	3	0	0	0	3

2020-21 Course Structure for M.TECH THERMAL ENGINEERING							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18 ME 5109	Numerical Methods in Thermal Engineering	3	1	0	0	4
2	18 ME 5110	Advanced Thermodynamics	3	1	0	0	4
3	18 ME 5111	Design of Thermal Systems	3	1	0	0	4
4	18 ME 5112	Advanced Heat and Mass Transfer	3	1	0	0	4
5		Elective -1	3	0	0	0	3
6		Elective -2	3	0	0	0	3
7	18 IE 5149	Seminar	0	0	4	0	2
Total			**18**	**4**	**4**	**0**	**24**
S E M E S T E R - 2							
1	18 ME 5213	Incompressible and Compressible Flows	3	1	0	0	4
2	18 ME 5214	Computational Fluid Dynamics	3	0	2	0	4
3	18 ME5215	Refrigeration and Cryogenics	3	1	0	0	4
4	18 ME 5216	Measurements in Thermal Engineering	3	1	0	0	4
5		Elective -3	3	0	0	0	3
6		Elective -4	3	0	0	0	3
7	18 IE 5250	Termpaper	0	0	4	0	2
Total			**18**	**3**	**6**	**0**	**24**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total Credits							**84**
ELECTIVES COURSES							
Elective -1							
1	18 ME 51E1	Heat Exchanger Design	3	0	0	0	3
2	18 ME 51E2	Convection and Two-Phase Flow	3	0	0	0	3
3	18 ME 51E3	Compact Heat Exchangers	3	0	0	0	3
Elective - 2							
1	18 ME 51F1	Engine Systems and Performance	3	0	0	0	3
2	18 ME 51F2	IC Engine Combustion and Pollution	3	0	0	0	3
3	18 ME 51F3	Alternative Fuels	3	0	0	0	3
Elective -3							

1	18 ME 52G1	Principles of Turbo-machinery	3	0	0	0	3
2	18 ME 52G2	Gas Turbine Engineering	3	0	0	0	3
3	18 ME 52G3	Turbo-Compressors	3	0	0	0	3
Elective - 4							
1	18 ME 52H1	Energy Conservation, Management & Audit	3	0	0	0	3
2	18 ME 52H2	Renewable Energy Technology	3	0	0	0	3
3	18 ME 52H3	Solar Energy and Wind Energy	3	0	0	0	3

2020-21 Course Structure for M.TECH - MACHINE DESIGN							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18 ME 5117	Design Methods	4	0	0	0	4
2	18 ME 5118	Design with Advanced materials	3	0	0	0	3
3	18 ME 5119	Theory of Elasticity and Plasticity	3	1	0	0	4
4	18 ME 5120	Modeling & Analysis-1 (CAD)	4	0	2	0	5
5		Elective -1	3	0	0	0	3
6		Elective -2	3	0	0	0	3
7	18 IE 5149	Seminar	0	0	4	0	2
Total			**20**	**1**	**6**	**0**	**24**
S E M E S T E R - 2							
1	18 ME 5221	Mechanical Vibrations	3	0	0	0	3
2	18 ME 5222	Design for Optimization	3	1	0	0	4
3	18 ME 5223	Advanced strength of materials	3	1	0	0	4
4	18 ME 5224	Modeling & Analysis-2 (FEM)	4	0	2	0	5
5		Elective -3	3	0	0	0	3
6		Elective -4	3	0	0	0	3
7	18 IE 5250	Termpaper	0	0	4	0	2
Total			**19**	**2**	**6**	**0**	**24**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total			**0**	**0**	**72**	**0**	**36**
Grand Total							**84**
ELECTIVES COURSES							
Elective -1							
1	18 ME 51I1	Precision and Quality Engineering	3	0	0	0	3

2	18 ME 51I2	Advanced Mechanisms	3	0	0	0	3
3	18 ME 51I3	Concurrent Engineering	3	0	0	0	3
Elective - 2							
1	18 ME 51J1	Design of Pressure Vessels and Plates	3	0	0	0	3
2	18 ME 51J2	Tribological System Design	3	0	0	0	3
3	18 ME 51J3	Product Design and Development	3	0	0	0	3
Elective -3							
1	18 ME 52K1	Mechanics of Composite Materials	3	0	0	0	3
2	18 ME 52K2	Machine Tool Design	3	0	0	0	3
3	18 ME 52K3	Fracture Mechanics	3	0	0	0	3
Elective - 4							
1	18 ME 52L1	Engineering Noise & Control	3	0	0	0	3
2	18 ME 52L2	Engineering Failure Analysis and prevention	3	0	0	0	3
3	18 ME 52L3	Design for Manufacturing, Assembly and Environment	3	0	0	0	3

2020-21 Course Structure for M.TECH - ROBOTICS & MECHATRONICS							
S E M E S T E R - 1							
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**S**	**Cr**
1	18 ME 5101	Fundamentals of Mechatronics	3	1	0	0	4
2	18 ME 5102	Advanced Engineering Mathematics	3	1	0	0	4
3	18 ME 5103	Sensors and Actuators	3	1	0	0	4
4	18 ME 5104	Modeling and Simulation of Mechatronic Systems	3	0	2	0	4
5		Elective -1	3	0	0	0	3
6		Elective -2	3	0	0	0	3
7	18 IE 5149	Seminar	0	0	4	0	2
Total			**18**	**3**	**6**	**0**	**24**
S E M E S T E R - 2							
1	18 ME 5205	Robotics: Advanced Concepts and Analysis	3	1	0	0	4
2	18 ME 5206	Control of Mechatronic Systems	3	1	0	0	4
3	18 ME 5207	Mechatronics Product Design	3	1	0	0	4
4	18 ME 5208	Precision Engineering	3	1	0	0	4
5		Elective – 3	3	0	0	0	3
6		Elective -4	3	0	0	0	3
7	18 IE 5250	Termpaper	0	0	4	0	2
Total			**18**	**4**	**4**	**0**	**24**
S E M E S T E R - 3 & 4							
1	18IE6050	Dissertation / Practise School	0	0	72	0	36
Total Credits							**84**

ELECTIVES COURSES							
Elective -1							
1	18 ME 51A1	Signal Processing in Mechatronic Systems	3	0	0	0	3
2	18 ME 51A2	MEMS and NEMS	3	0	0	0	3
3	18 ME 51A3	Vehicle Dynamics and Multi-body Systems	3	0	0	0	3
Elective - 2							
1	18 ME 51B1	Emerging Smart Materials for Mechatronics Applications	3	0	0	0	3
2	18 ME 51B2	Intelligent Visual Surveillance	3	0	0	0	3
3	18 ME 51B3	Microprocessors and Embedded Systems	3	0	0	0	3
Elective -3							
1	18 ME 52C1	Computational Fluid Dynamics	3	0	0	0	3
2	18 ME 52C2	Nonlinear Optimization	3	0	0	0	3
Elective - 4							
1	18 ME 52D1	Industrial Automation	3	0	0	0	3
2	18 ME 52D2	Fuzzy Sets and Artificial Intelligence	3	0	0	0	3

Name of the Programme : M.Sc.(Applied Mathematics)

S.No	Course Code	Course Name	L	T	P	S	Cr	Prerequisites
1	19AM1101	Real Analysis	4	0	0	0	4	Nil
2	19AM1102	Ordinary Differential Equations	3	0	2	0	4	Nil
3	19AM1103	Numerical Methods	3	0	2	0	4	Nil
4	19AM1104	Introduction to Computer Programming	3	0	2	0	4	Nil
5	19AM1105	Mathematical Statistics	4	0	0	0	4	Nil
6	19AM1106	Seminar-1	0	0	2	0	1	Nil
7	19AM1201	Soft computing	4	0	0	0	4	Nil
8	19AM1202	Data Structures	3	0	2	0	4	Nil
9	19AM1203	Statistical Inference	4	0	0	0	4	Nil
10	19AM1204	Discrete Mathematics	4	0	0	0	4	Nil
11	19AM1205	Complex Analysis	4	0	0	0	4	Nil
12	19AM1206	Seminar-2	0	0	2	0	1	Nil
13	19AM2101	Partial Differential Equations	4	0	0	0	4	Nil
14	19AM2102	Relational Algebra and DBMS	3	0	2	0	4	Nil
15	19AM2103	Abstract Algebra	4	0	0	0	4	Nil
16	19AM2104	Transform Techniques	3	0	2	0	4	Nil
17		Elective-I	4	0	0	0	4	Nil
18	19AM2105	Seminar-3	0	0	2	0	1	Nil
19	19AM2201	Topology	4	0	0	0	4	Nil
20	19AM2202	Mathematical Programming	4	0	0	0	4	Nil
21		Elective-II	4	0	0	0	4	Nil
22		Elective-III	4	0	0	0	4	Nil

23	19AM2203	Dissertation with Research Publication	0	0	24	0	12	Nil
ELECTIVE STREAM -CRYPTOGRAPHY & CYBERSECURITY								
1	19AM2106	Crypto Analysis And Cyber Defense	3	0	2	0	4	Nil
2	19AM2204	Computer Networks and Security	3	0	2	0	4	Nil
3	19AM2205	Crypto currencies & Block chain Technologies	3	0	2	0	4	Nil
ELECTIVE STREAM - DATA ANALYTICS								
1	19AM2107	Statistics with R Programming	3	0	2	0	4	Nil
2	19AM2206	Big Data Analytics	3	0	2	0	4	Nil
3	19AM2207	Cloud Computing	3	0	2	0	4	Nil
ELECTIVE STREAM – Fluid Mechanics								
1	19AM2108	Continuum Mechanics-1	4	0	0	0	4	Nil
2	19AM2208	Continuum Mechanics-2	4	0	0	0	4	Nil
3	19AM2209	Computational Fluid Dynamics	3	0	2	0	4	Nil

Name of the Programme : M.Sc. Physics

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	19PH5101	Mathematical Physics	4	0	0	0	4	NIL
2	19PH5102	Classical Mechanics	4	0	0	0	4	NIL
3	19PH5103	Electrodynamics	4	0	0	0	4	NIL
4	19PH5104	Analog Electronics	4	0	0	0	4	NIL
5	19PH5105	Computational Physics	4	0	0	0	4	NIL
6	19PH5106	Analog Electronics Lab	0	0	6	0	3	NIL
7	19PH5107	Computational Physics Lab	0	0	4	0	2	NIL
8	19PH5108	Seminar-1	0	0	2	0	1	NIL
9	19PH5201	Statistical Mechanics	4	0	0	0	4	NIL
10	19PH5202	Quantum Mechanics - 1	4	0	0	0	4	NIL
11	19PH5203	Fiber Optics and Nonlinear Optics	4	0	0	0	4	NIL
12	19PH5204	Solid State Physics - 1	4	0	0	0	4	NIL
13	19PH5205	Digital Electronics	4	0	0	0	4	NIL
14	19PH5206	Solid State Physics - Lab-1	0	0	6	0	3	NIL
15	19PH5207	Digital Electronics Lab	0	0	4	0	2	NIL
16	19PH5208	Seminar -2	0	0	2	0	1	NIL
17	19PH5301	Quantum Mechanics-2 (QM-2)	4	0	0	0	4	NIL
18	19PH5302	Atomic and Molecular Spectroscopy (AMS)	4	0	0	0	4	NIL
19	19PH5303	Nuclear Physics (NP)	2	0	0	0	2	NIL
20	19PH5304	Particle Physics (PP)	2	0	0	0	2	NIL
21	19PH5305	Solid State Physics -2 (SSP-2)	4	0	0	0	4	NIL
22	19PH5306	Lasers and Photonics (LP)	4	0	0	0	4	NIL
23	19PH5307	Term paper (TP)	0	0	4	0	2	NIL
24	19PH5308	Solid State Physics-2 Lab (SSP-2 Lab)	0	0	6	0	3	NIL
25	19PH54EX	Elective - 1	3	0	0	0	3	NIL

26	19PH54EX	Elective - 2	3	0	0	0	3	NIL
27	19PH54EX	Elective - 3	3	0	0	0	3	NIL
28	19PH5401	Dissertation	0	0	16		8	NIL
Elective-1								
1	19PH54E1	Experimental Techniques	3	0	0	0	3	NIL
2	19PH54E2	Basic Communication Theory	3	0	0	0	3	NIL
Elective-2								
1	19PH54E3	Physics of Nanomaterials	3	0	0	0	3	NIL
2	19PH54E4	Radar systems and satellite communication	3	0	0	0	3	NIL
Elective-3								
1	19PH54E5	Thin-film Technology	3	0	0	0	3	NIL
2	19PH54E6	Antenna theory and Radio-wave propagation	3	0	0	0	3	NIL

Name of the Programme :M.Sc Chemistry

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	20CY5101	Theoretical Chemistry-I	4	0	0	0	4	Nil
2	20CY5102	Inorganic Chemistry- I	4	0	6	0	7	Nil
3	20CY5103	Organic Chemistry-I	4	0	6	0	7	Nil
4	20CY5104	Physical Chemistry-I	4	0	6	0	7	Nil
5	20CY5201	Theoretical Chemistry-II	4	0	0	0	4	20CY5101
6	20CY5202	Inorganic Chemistry- II	4	0	6	0	7	20CY5102
7	20CY5203	Organic Chemistry-II	4	0	6	0	7	20CY5103
8	20CY5204	Physical Chemistry-II	4	0	6	0	7	20CY5104
9	20CY5310	Organic Synthesis-I	4	0	6	0	7	Nil
10	20CY5311	Natural Products and Bio-molecules	4	0	6	0	7	Nil
11	20CY5312	Organic Spectroscopy	4	0	0	0	4	Nil
12	20CY5407	Organic Synthesis-II	4	0	6	0	7	20CY5310
13	20CY5408	Advance Heterocyclic chemistry	4	0	6	0	7	Nil
14	20CY5409	Dissertation with Research Publication	0	0	12	0	6	Nil
15	20CY53XX	Elective-1	3	0	0	0	3	Nil
16	20CY53XX	Elective-2	3	0	0	0	3	Nil
17	20CY54XX	Elective-3	3	0	0	0	3	Nil
18	20CY5301	Instrumental Methods of Analysis-I	4	0	6	0	7	Nil
19	20CY5302	Quality Control and Classical Methods of Analysis	4	0	0	0	4	Nil
20	20CY5303	Applied Chemical Analysis	4	0	6	0	7	Nil
21	20CY5401	Instrumental Methods of Analysis-II	4	0	6	0	7	20CY5301
22	20CY5402	Advance Applied Chemical Analysis	4	0	6	0	7	20CY5303
23	20CY5403	Dissertation with Research Publication	0	0	12	0	6	Nil
List of Elective Courses								
1	20CY5304	Separation Techniques	3	0	0	0	3	Nil

2	20CY5305	Applications of Chemical Spectroscopy	3	0	0	0	3	Nil
3	20CY5306	Bio analytical Chemistry	3	0	0	0	3	Nil
4	20CY5307	Environmental Chemistry	3	0	0	0	3	Nil
5	20CY5308	Surface Analytical Techniques	3	0	0	0	3	Nil
6	20CY5309	Analysis of Food and Drugs	3	0	0	0	3	Nil
7	20CY5404	Chromatographic Techniques & Method Validation	3	0	0	0	3	Nil
8	20CY5405	Classical Methods of Analysis	3	0	0	0	3	Nil
9	20CY5406	Chemo Sensors and body fluid analysis	3	0	0	0	3	Nil
10	20CY5313	Photo Chemistry and Pericyclic reactions	3	0	0	0	3	Nil
11	20CY5314	Organometallic Chemistry	3	0	0	0	3	Nil
12	20CY5315	Bio Organic Chemistry	3	0	0	0	3	Nil
13	20CY5316	Green & Sustainable Chemistry	3	0	0	0	3	Nil
14	20CY5317	Supra molecular Chemistry	3	0	0	0	3	Nil
15	20CY5318	Medicinal chemistry	3	0	0	0	3	Nil
16	20CY5410	Drug Design & Development	3	0	0	0	3	Nil
17	20CY5411	Chemistry of Drugs and Pharmaceuticals	3	0	0	0	3	Nil
18	20CY5412	Nano Chemistry	3	0	0	0	3	Nil

Name of the Programme: M. Sc. (Finance &Control)								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	20MF1101	Accounting for Managers	3	2	0	0	5	NIL
2	20MF1102	Managerial Economics	3	0	0	0	3	NIL
3	20UC1151	Management Soft Skills	1	0	4	0	3	NIL
4	20MF1103	Cost and Management Accounting	3	2	0	0	5	NIL
5	20MF1104	Financial Management	3	2	0	0	5	NIL
6	20MF1105	Financial Institutions and Markets	3	0	0	0	3	NIL
7	20MF1208	Corporate Finance & Business Valuation	3	2	0	0	5	NIL
8	20MF1209	Accountant in Business	3	2	0	0	5	NIL
9	20MF1210	Financial Reporting	3	2	0	0	5	NIL
10	20MF1211	Performance Management-I	3	2	0	0	5	NIL
11	20MF1212	Corporate Accounting	3	2	0	0	5	NIL
12	20MF1213	Corporate and Business Law	4	0	0	0	4	NIL
13	20MF1214	Audit and Assurance Standards	4	0	0	0	4	NIL
14	20 PT 1201	Practice School / SIP	0	0	8	8	6	NIL
15	20MF2115	Financial Analysis and Control	3	2	0	0	5	NIL

16	20MF2116	Financial Strategy of Business	3	2	0	0	5	NIL
17	20MF2117	Investment Analysis and Portfolio Management	3	2	0	0	5	NIL
18	20MF2118	Forensic Accounting	3	2	0	0	5	NIL
19	20MF2119	Strategic Business Leader	3	0	0	0	3	NIL
20	20MF2120	Strategic Business Reporting	3	2	0	0	5	NIL
21	20MF2121	Performance Management-II	3	2	0	0	5	NIL
22	20MF2223	Empirical Methods in Finance	3	2	0	0	5	NIL
23	20MF2224	Taxation [India Taxation instead of UK]	3	2	0	0	5	NIL
24	20MF2226	Finance Research Project	0	0	12	0	6	NIL
25	20MF22xx	Specialization - I	3	2	0	0	5	NIL
26	20MF22xx	Specialization - II	3	0	0	0	3	NIL
27	20PT1201	Practice School / SIP	0	0	8	8	6	NIL
28	20ACCAP4	Advanced Financial Management	3	2	0	0	5	NIL
29	20ACCAP7	Advanced Audit and Assurance	3	2	0	0	5	NIL
Specialization - I								
1	20MF2130	Corporate Re-structuring	3	2	0	0	5	NIL
2	20MF2131	Financial Engineering and Derivatives	3	2	0	0	5	NIL
3	20MF2132	Human Resource Accounting	3	2	0	0	5	NIL
4	20MF2133	Risk and Insurance Management	3	2	0	0	5	NIL
Specialization - II								
1	20MF2231	International Business	3	0	0	0	3	NIL
2	20MF2232	International Economics	3	0	0	0	3	NIL
3	20MF2233	International Banking	3	0	0	0	3	NIL
4	20MF2234	International Environment of Business	3	0	0	0	3	NIL

Name of the Programme: MA English

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	18ENG101	Poetry-I	5	0	0	0	5	Nil
2	18ENG102	Drama-I	5	0	0	0	5	Nil
3	18ENG103	Prose-I	5	0	0	0	5	Nil
4	18ENG104	Fiction-I	5	0	0	0	5	Nil
5	18ENG105	Book Review	0	0	8	0	4	Nil
6	18ENG201	Poetry-II	5	0	0	0	5	Nil
7	18ENG202	Drama-II	5	0	0	0	5	Nil
8	18ENG203	Prose-II	5	0	0	0	5	Nil
9	18ENG204	ELT	5	0	0	0	5	Nil

10	18ENG205	Fiction-II	5	0	0	0	5	Nil
11	18ENG301	Literary Criticism and New Literature	5	0	0	0	5	Nil
12	18ENG302	American Literature & Indian Writing in English-I	5	0	0	0	5	Nil
13	18ENG307	Mandatory Term Paper	0	0	4	0	2	Nil
14	18ENG401	American Literature & Indian Writing in English-II	5	0	0	0	5	Nil
15	18ENG402	Literature and Media Studies	5	0	0	0	5	Nil
16	18ENG30X	Elective - 1	5	0	0	0	5	Nil
17	18ENG30X	Elective - 2	5	0	0	0	5	Nil
18	18ENG40X	Elective - 3	5	0	0	0	5	Nil
19	18ENG406	Dissertation	0	0	20	0	10	Nil
ELECTIVE PAPERS 1 & 2								
1	18ENG303	English Language Teaching Practice	5	0	0	0	5	Nil
2	18ENG304	Women's Writing	5	0	0	0	5	Nil
3	18ENG305	Colonial Encounter	5	0	0	0	5	Nil
4	18ENG306	European Classics	5	0	0	0	5	Nil
ELECTIVE PAPERS 3								
1	18ENG403	Research Methodology	5	0	0	0	5	Nil
2	18ENG404	Communication & Hr Skills	5	0	0	0	5	Nil
3	18ENG405	Aspects Of Editing & Creative Writing	5	0	0	0	5	Nil

Name Of The Programme: M.B.A General								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**CREDITS**	**Pre requisites**
1	19MB51C0	Quantitative Methods	3	0	0	0	3	NIL
2	19MB51C1	Organization Behavior	3	0	0	0	3	NIL
3	19MB51C2	Business Economics	3	0	0	0	3	NIL
4	19MB51C3	Financial and Management Accounting	2	1	0	0	3	NIL
5	19MB51C4	Marketing Management	3	0	0	0	3	NIL
6	19MB51C5	Financial Management	2	1	0	0	3	NIL
7	19MB51C6	Operations Management	3	0	0	0	3	NIL
8	19MB51C7	Human Resource Management	3	0	0	0	3	NIL
9	19MB51K7	Business Communication Skills	1	0	2	0	2	NIL
10	19MB52C1	Introduction to Business Analytics & R Programming	3	0	0	0	3	NIL
11	19MB52C2	Business Research Methodology	3	0	0	0	3	NIL
12	19MB51C8	Business Environment	3	0	0	0	3	NIL
13	20HS114	Soft Skills for Managers	2	0	2	0	3	NIL
14	20MB61C0	Information Systems &ERP	3	0	0	0	3	NIL
15	19MB62C0	Entrepreneurship & Family Business	3	0	0	0	3	NIL
16	19MB62C1	Business Ethics & Corporate Governance	3	0	0	0	3	NIL
17	19MB62C2	Leadership in Organizations	3	0	0	0	3	NIL

18	19MB62C3	Business Law	3	0	0	0	3	NIL
19	19MB62C4	Strategic Management	3	0	0	0	3	NIL
20	19MB61E8	Management Research Project II	2	0	8	0	6	NIL
21	19MB52M0	Digital and Social Media Marketing	3	0	0	0	3	NIL
22	19MB52F0	Wealth Management	3	0	0	0	3	NIL
23	19MB52H0	Organizational Design and Development	3	0	0	0	3	NIL
24	19MB52U0	Introduction to Advanced Technologies	3	0	0	0	3	NIL
25	19MB52L0	World Class Manufacturing	3	0	0	0	3	NIL
26	19MB52M1	Product & Brand Management	3	0	0	0	3	NIL
27	19MB52M2	Promotion & Distribution Management	3	0	0	0	3	NIL
28	19MB52M3	Global Marketing Management	3	0	0	0	3	NIL
29	19MB52M4	Advt & Sales Promotion	3	0	0	0	3	NIL
30	19MB52M5	Consumer Behavior	3	0	0	0	3	NIL
31	19MB61M7	Services Marketing	3	0	0	0	3	NIL
32	19MB61M8	Customer relationship Management	3	0	0	0	3	NIL
33	19MB61M9	Rural & Agricultural Marketing	3	0	0	0	3	NIL
34	19MB61M10	Event & Entertainment Management	3	0	0	0	3	NIL
35	19MB52M6	Digital Marketing (Imp)	3	0	0	0	3	NIL
36	19MB61M11	Sales & Promotion Management	3	0	0	0	3	NIL
37	19MB61M12	Logistics & Supply Chain Management	3	0	0	0	3	NIL
38	19MB52F1	Financial Markets and Services	3	0	0	0	3	NIL
39	19MB52F2	Security Analysis and Portfolio Management	2	1	0	0	3	NIL
40	19MB52F3	Behavioral finance	3	0	0	0	3	NIL
41	19MB52F4	Taxation management	2	1	0	0	3	NIL
42	19MB61F7	Strategic Financial Management	2	1	0	0	3	NIL
43	19MB61F8	Financial Derivatives	2	1	0	0	3	NIL
44	19MB61F9	Project Management	3	0	0	0	3	NIL
45	19MB61F10	Infrastructure Finance	3	0	0	0	3	NIL
46	19MB61F11	International Financial Management	2	1	0	0	3	NIL
47	19MB52F5	Indian Financial System	3	0	0	0	3	NIL
48	19MB61F6	Managing Personal Finance	3	0	0	0	3	NIL
49	19MB61F12	Financial statement analysis	2	1	0	0	3	NIL
50	19MB61F13	Personal Taxation	2	1	0	0	3	NIL
51	19MB52H1	Talent and Competency Management	3	0	0	0	3	NIL
52	19MB52H2	Dynamics of Employee Relations	3	0	0	0	3	NIL
53	19MB52H3	Performance Management & Reward Systems	3	0	0	0	3	NIL
54	19MB52H4	Labor Legislation	3	0	0	0	3	NIL

55	19MB61H7	International Human Resource Management	3	0	0	0	3	NIL
56	19MB61H8	People Analytics	3	0	0	0	3	NIL
57	19MB61H9	Organizational Change & Change Management	3	0	0	0	3	NIL
58	19MB61H11	Strategic Human Resource Management	3	0	0	0	3	NIL
59	19MB52H5	Performance Management	3	0	0	0	3	NIL
60	19MB52H6	Human Resource Planning	3	0	0	0	3	NIL
61	19MB61H12	Compensation Management	3	0	0	0	3	NIL
62	19MB61H13	Training & Development	3	0	0	0	3	NIL
63	19MB61H14	Conflict Management & Negotiation	3	0	0	0	3	NIL
64	19MB52L1	Materials Management	3	0	0	0	3	NIL
65	19MB52L2	Fundamentals of Supply Chain Management	3	0	0	0	3	NIL
66	19MB52L3	Operations Strategy	3	0	0	0	3	NIL
67	19MB52L4	Total Quality Management	3	0	0	0	3	NIL
68	19MB61L5	Lean Management	3	0	0	0	3	NIL
69	19MB61L6	Warehouse Management	3	0	0	0	3	NIL
70	19MB61L7	Supply Chain Analytics	2	0	2	0	3	NIL
71	19MB61L8	International Logistics Management	3	0	0	0	3	NIL
72	20MB52U1	Data Visualization using Tableau	2	0	2	0	3	NIL
73	19MB52U2	Econometrics with Business Applications using R	2	0	2	0	3	NIL
74	19MB52U3	Data analysis using SPSS	2	0	2	0	3	NIL
75	19MB52U4	Data Warehousing & Data Mining	2	0	2	0	3	NIL
76	19MB61U5	Advanced Business Analytics	2	0	2	0	3	NIL
77	19MB61U6	Business Analytics in Marketing	2	0	2	0	3	NIL
78	19MB61U7	Business Analytics in Finance	2	0	2	0	3	NIL
79	19MB61U8	Business Forecasting with R	2	0	2	0	3	NIL
80	19MB61U9	Advanced Excel	2	0	2	0	3	NIL
81	19MB61U10	Big Data Analytics and Its Application	2	0	2	0	3	NIL
82	20MB61U11	Machine Learning with Business Applications (with R and Python)	2	0	2	0	3	NIL
83	20MB61U12	Data Visualization using R/Excel/Python	2	0	2	0	3	NIL
84	19MB52B0	Overview of Banking	3	0	0	0	3	NIL
85	19MB61B1	Banking Service Operations	3	0	0	0	3	NIL
86	19MB52D0	Overview of Healthcare Management	3	0	0	0	3	NIL
87	19MB61D1	Management of Healthcare Operations	3	0	0	0	3	NIL
88	19MB52S0	Life Insurance	3	0	0	0	3	NIL
89	19MB61S1	General Insurance	3	0	0	0	3	NIL
90	19MB52G0	Overview of Agriculture & Rural Sectors in india	3	0	0	0	3	NIL
91	19MB61G1	Management of Agricultural & Rural	3	0	0	0	3	NIL

		Development in India						
92	19MB52R0	Overview of Retailing	3	0	0	0	3	NIL
93	19MB61R1	Management of Retail Operations	3	0	0	0	3	NIL
94	19MB52I0	IT Enabled Services	3	0	0	0	3	NIL
95	19MB61I1	Marketing of Software Solutions (Pre-requisite: Project Management)	3	0	0	0	3	NIL
96	19MB52P0	Pharmaceutical Marketing Management	3	0	0	0	3	NIL
97	19MB61P1	Advanced Pharmaceutical Marketing Management	3	0	0	0	3	NIL
98	19CMA 1A	Financial Planning, Performance & Analytics	3	1	0	0	4	NIL
99	19CMA 1B	Financial Reporting & Control	3	1	0	0	4	NIL
100	19CMA 2A	Strategic Financial Management - I	3	1	0	0	4	NIL
101	19CMA 2B	Strategic Financial Management - II	3	1	0	0	4	NIL

NAME OF THE PROGRAMME: PHARM.D (DOCTOR OF PHARMACY)

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CREDITS	Pre requisites
1	PHMD1.1	Human Anatomy and Physiology	3	1	3	0	6	NIL
2	PHMD1.2	Pharmaceutics	2	1	3	0	5	NIL
3	PHMD1.3	Medicinal Biochemistry	3	1	3	0	6	NIL
4	PHMD1.4	Pharmaceutical Organic Chemistry	3	1	3	0	6	NIL
5	PHMD1.5	Pharmaceutical Inorganic Chemistry	2	1	3	0	5	NIL
6	PHMD1.6M/B	Remedial Mathematics/ Biology*	3	1	3*	0	4/7*	NIL
7	PHMD2.1	Pathophysiology	3	1	0	0	4	NIL
8	PHMD2.2	Pharmaceutical Microbiology	3	1	3	0	6	NIL
9	PHMD2.3	Pharmacognosy & Phytopharmaceuticals	3	1	3	0	6	NIL
10	PHMD2.4	Pharmacology-I	3	1	0	0	6	NIL
11	PHMD2.5	Community Pharmacy	2	1	0	0	3	NIL
12	PHMD2.6	Pharmacotherapeutics-I	3	1	3	0	6	NIL
13	PHMD3.1	Pharmacology-II	3	1	3	0	6	NIL
14	PHMD3.2	Pharmaceutical Analysis	3	1	3	0	6	NIL
15	PHMD3.3	Pharmacotherapeutics-II	3	1	3	0	6	NIL
16	PHMD3.4	Pharmaceutical Jurisprudence	2	0	0	0	2	NIL
17	PHMD3.5	Medicinal Chemistry	3	1	3	0	6	NIL
18	PHMD3.6	Pharmaceutical Formulations	2	1	3	0	5	NIL
19	PHMD4.1	Pharmacotherapeutics-III	3	1	3	0	6	NIL
20	PHMD4.2	Hospital Pharmacy	2	1	3	0	5	NIL
21	PHMD4.3	Clinical Pharmacy	3	1	3	0	6	NIL
22	PHMD4.4	Biostatistics & Research Methodology	2	1	0	0	3	NIL
23	PHMD4.5	Biopharmaceutics & Pharmacokinetics	3	1	3	0	6	NIL
24	PHMD4.6	Clinical Toxicology	2	1	0	0	3	NIL
25	PHMD5.1	Clinical Research	3	1	0	0	4	NIL

26	PHMD5.2	Pharmacoepidemiology and Pharmacoeconomics	3	1	0	0	4	NIL
27	PHMD5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	1	0	0	3	NIL
28	PHMD5.4	Clerkship *	0	1	0	0	1	NIL
29	PHMD5.5	Project work (Six Months)	0	0	20	0	10	NIL
30	PHMD6.1	Internship or Residency Training	0	6	36	0	24	NIL

NAME OF THE PROGRAMME: M.PHARMACY - PHARMACEUTICS

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CR	Pre requisites
1	MPH101T	Modern Pharmaceutical Analytical Techniques	3	1	0	0	4	NIL
2	MPH102T	Drug Delivery Systems	3	1	0	0	4	NIL
3	MPH103T	Modern Pharmaceutics	3	1	0	0	4	NIL
4	MPH104T	Regulatory Affairs	3	1	0	0	4	NIL
5	MPH105P	Pharmaceutics Practical I	0	0	12	0	6	NIL
6	MPHSA1	Seminar/Assignment	0	7	0	0	4	NIL
7	MPH201T	Molecular Pharmaceutics (Nano Tech and Targeted DDS)	3	1	0	0	4	NIL
8	MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	3	1	0	0	4	NIL
9	MPH203T	Computer Aided Drug Delivery System	3	1	0	0	4	NIL
10	MPH204T	Cosmetic and Cosmeceuticals	3	1	0	0	4	NIL
11	MPH205P	Pharmaceutics Practical II	0	0	12	0	6	NIL
12	MPHSA2	Seminar/Assignment	0	7	0	0	4	NIL
13	MRM 301T	Research Methodology and Biostatistics*	3	1	0	0	4	NIL
14	MPH302	Journal club	0	1	0	0	1	NIL
15	MPH303	Discussion / Presentation (Proposal Presentation)	0	2	0	0	2	NIL
16	MPH304	Research Work	0	0	28	0	14	NIL
17	MPH401	Journal Club	0	1	0	0	1	NIL
18	MPH402	Research Work	0	0	31	0	16	NIL
19	MPH403	Discussion/Final Presentation	0	3	0	0	3	NIL
20	MPHCCA	Co-curricular Activities (Attending Conference, Scientific Presentations and Other Scholarly Activities)					2 to 7	NIL

Name of the Programme: LL.M

SNO	COURSE CODE	COURSE NAME	L	T	P	S	CR	Pre requisites
1	20ML11C1	Jurisprudence -I	5	1	0	0	6	NIL
2	20ML12C3	Jurisprudence -II	5	1	0	0	6	NIL
3	20ML12C4	Systems Of Governance And Basic Features Of Indian Constitution	5	1	0	0	6	NIL

4	20ML11C2	Research Methodology	5	1	0	0	6	NIL
5	20ML22C5	Seminars & Teaching Assignments	0	0	8	0	4	NIL
6	20ML22C6	Dissertation	0	0	10	0	5	NIL
7	20ML11A1	Constitutional Law- I	5	1	0	0	6	NIL
8	20ML12A2	Constitutional Law-II	5	1	0	0	6	NIL
9	20ML21A3	Constitutional Law-III	5	1	0	0	6	NIL
10	20ML21A4	Administrative Law-I	5	1	0	0	6	NIL
11	20ML21A5	Administrative Law-Ii	5	1	0	0	6	NIL
12	20ML11B1	Criminal Law - I	5	1	0	0	6	NIL
13	20ML12B2	Criminal Law – Ii	5	1	0	0	6	NIL
14	20ML21B3	Criminology, Victimology And Penology	5	1	0	0	6	NIL
15	20ML21B4	Law Relating To Socio Economic Offences	5	1	0	0	6	NIL
16	20ML21B5	Law Of Torts	5	1	0	0	6	NIL
17	20ML11P1	Law On Trademarks And Copy Rights	5	1	0	0	6	NIL
18	20ML12P2	Law On Patents And Designs	5	1	0	0	6	NIL
19	20ML21P3	Law On G.I And Plant Varieties	5	1	0	0	6	NIL
20	20ML21P4	Evaluation Of Cyberspace	5	1	0	0	6	NIL
21	20ML21P5	Cyber Crimes And E-Business	5	1	0	0	6	NIL
22	20ML11D1	Law Of Contracts	5	1	0	0	6	NIL
23	20ML12D2	Corporate Law- I	5	1	0	0	6	NIL
24	20ML21D3	Corporate Law- Ii	5	1	0	0	6	NIL
25	20ML21D4	Law Of Banking	5	1	0	0	6	NIL
26	20ML21D5	Law Of Insurance	5	1	0	0	6	NIL