

ACADEMIC REGULATIONS (R23) FOR B.TECH REGULAR STUDENTS WITH EFFECT FROM THE ACADEMIC YEAR 2023-24

Agenda Point 2: To discuss and approve the course structures of B.Tech & M.Tech programs recommended by various Boards of Studies.

The Principal presented the course structures of B.Tech & M.Tech programs recommended by various Boards of Studies to the members of Academic Council. The members have approved the course structures of B.Tech & M.Tech programs to be effective from the A.Y. 2023-24 and the same are presented in **ANNEXURE – B**.

Agenda Point 3: To discuss and approve the Academic Regulations (R23).

The Principal presented the autonomous Academic Regulations (R23) of AVN Institute of Engineering and Technology to the members of Academic Council. The members have approved the autonomous Academic Regulations (R23) to be effective from the A.Y. 2023-24 as they are similar to that of R22 regulations of JNTUH with TWO minor changes as described below.

1. Integrated Courses:

- ❖ Introducing integrated courses, particularly in the case of programming courses.
- ❖ The assessment procedure in the case of integrated courses is similar to that of theory and laboratory courses. Both theory and laboratory components are evaluated each for 100 marks as per the JNTUH regulations. But, a student is declared pass when he secures a minimum of 40% of total marks in both theory and Laboratory independently; otherwise the student has to reappear for both theory and laboratory examinations once again.

2. Provision for Vertical mobility:

- ❖ The students are permitted to register in advance the two elective courses being offered in IV B Tech II Semester (one subject in III-II and another subject in IV-I), to enable the students to concentrate fully on the project work and also to avail full semester internship in the industry. This is applicable for those students with no backlogs and who have secured 7.0 and above CGPA up to III-I Semester as on that day. Those students who will be undergoing full semester internship during the IV B.Tech second semester are required to submit the attendance sheet and progress report of the Project Work every fortnight to the HoD concerned.

The R23 Academic Regulations approved by the Academic Council are presented in **ANNEXURE – C**.

Agenda Point 4: Any other matter with the permission of the chair.

1. Prof. T. Kishen Kumar Reddy suggested to clearly mention the prerequisites for every subject along with course objectives and course outcomes while framing the syllabus.
2. The meeting was closed with vote of thanks.

ANNEXURE – A: Minutes of the meeting of first Academic Council

The first meeting of Academic Council was conducted on 06.09.2023 at 3.00PM through on-line using Google meet platform. The following are the minutes of the meeting of first Academic Council.

Agenda Point 1: To nominates two Subject Experts from outside the parent university for each Board of Studies.

The following members are nominated as the subject experts for different Boards of Studies by the Academic Council.

S.No	Name of the	Subject Experts nominated	
	Board of Studies	from outside the Parent University	
		Faculty Name	Designation
1	CSE,CSE(AIML), CSE(CS),CSE(DS)	Dr.P. Krishna Reddy	Professor, Dept. of CSE, IIIT, Hyderabad.
		Dr.V. Vijaya Kumar	Professor and Dean, School of Engineering,Anurag University, Hyderabad.
		Dr. N Raghu Kishore	Associate Professor, Dept of CSE, Mahendra University, Hyderabad.
2	AI&DS	Dr.R.B.V. Subrahmanyam	Professor, Department of CSE , NIT, Warangal.
		Dr.M. Aruna	Professor, Department of CSE, BITS, Hyderabad.
3	ECE	Dr. K.V. Sridhar	Professor, Dept. of ECE, NIT, Warangal.
		Dr. P. Chandra Sekhar	Professor, Dept. of ECE, College of Engineering, Osmania University, Hyderabad.
4	Civil Engineering	Prof. N Suresh Kumar	Professor, Department of Civil Engg, College of Engineering, Osmania University, Hyderabad.
		Dr. T.D. Guneswara Rao	Professor, Department of Civil Engg , NIT, Warangal.
5	Mechanical Engineering	Prof. P. Laxminarayana	Professor & Registrar, College of Engineering, Osmania University, Hyderabad.
		Dr. G. Naga Srinivasulu	Professor, Dept. of ME, NIT, Warangal.
6	MATHEMATICS	Dr.N. Kishan	Professor , Dept. of Mathematics, Osmania University, Hyderabad.
7	PHYSICS	Dr.G.Upender	Professor , Dept. of Physics. Osmania University, Hyderabad.
8	CHEMESTRY	Dr.Ramu Sridhar	Professor , School of Chemistry, University of Hyderabad (HCU), Hyderabad.
9	ENGLISH	Dr.Parimala Kulkarni	Professor , Dept. of English. Osmania University, Hyderabad.

10	MBA	Dr.D.Sreeramulu	Principal, University College of Commerce and Business Management, Osmania University, Hyderabad
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Agenda Point 2: To discuss and approve the minutes of the meeting of Common BOS held on 18.08.2023.

The Principal presented the minutes of the meeting of Common BOS. The Academic Council had approved the minutes of the meeting of common BOS unanimously as the decisions taken in the common BOS meeting are in line with the R22 curriculum of JNTUH with below 20 percent variation as far as Humanities & Sciences and Engineering Sciences courses were concerned and the Academic Regulations are almost same as the R22 regulations of JNTUH with only two minor modifications.

Agenda 3: To discuss the Academic Regulations (R23).

It is proposed to follow the R22 Academic Regulation of JNTUH for UG and PG programmes as it is with two minor changes.

The following two minor changes that were proposed for the consideration of Common BOS were tentatively approved subject to the final approval of the Academic Council.

3. Integrated Courses:

- ❖ Introducing integrated courses, particularly in the case of programming courses.
- ❖ The assessment procedure in the case of integrated courses is as follows:
 - Of 40 Internal Marks, 20 Marks for the performance in Mid-term examinations, 5 Marks for Assignment and 15 Marks for Laboratory (10 Marks for Day to Day Evaluation and 5 Marks for Internal Test coupled with Viva Voce).
 - Of 60 Marks of Semester End Examination, 40 Marks for Theory and 20 Marks for Laboratory. A Student is supposed to secure a minimum of 40% marks in both theory and Laboratory independently; otherwise the student has to appear for both theory and laboratory examinations once again.

4. Provision for Vertical mobility:

- ❖ Permitting the students to register in advance the two elective courses being offered in IV B Tech II Semester (one subject in III-II and another subject in IV-I), to enable the students to concentrate fully on the project work and also to avail full time internship in the industry. This is applicable for those students with no backlogs and who have secured 7.0 and above CGPA up to III-I Semester.

Agenda Point 4: Any other academic matter with the permission of Chair.

As there is no other item to discuss, the meeting was closed with vote of thanks.

ANNEXURE – B: Course Structures of UG and PG Programs

B.Tech - Civil Engineering Course Structure

I B.Tech (I Sem)

Branch/Specialization: Civil Engineering

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	ES106	Programming for Problem Solving*	2	0	4	4
4	ES108	Computer Aided Engineering Graphics	1	0	4	3
5	HS104	Applied Physics Lab	0	0	3	1.5
6	ES114	Engineering Workshop	1	0	3	2.5
7	MC101	Environmental Science	1	0	0	0
Total			10	2	14	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

***Integrated Course (Theory & Lab)**

I B.Tech (II Sem)

Branch/Specialization: Civil Engineering

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES107	Python Programming *	2	0	2	3
5	ES110	Engineering Mechanics	2	1	0	3
6	ES112	Surveying	2	0	0	2
7	HS106	Engineering Chemistry Lab	0	0	2	1
8	HS108	English Language and Communications Skills Lab	0	0	2	1
9	MC102	Morals and Ethics	1	0	0	0
Total			15	3	6	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

***Integrated Course (Theory & Lab)**

II B.Tech (I Sem)

Branch/Specialization: Civil Engineering

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CE201	Building Materials, Construction and Planning	3	0	0	3
2	CE202	Strength of Materials-I	3	0	0	3
3	CE204	Fluid Mechanics	3	0	0	3
4	CE205	Concrete Technology	3	0	0	3
5	CE207	Engineering Geology	3	0	0	3
6	CE208	Project Management	2	0	0	2
7	CE203	Strength of Materials Lab	0	0	2	1
8	CE206	Concrete Technology Lab	0	0	2	1
9	CE209	Surveying Lab - I	0	0	2	1
10	MC201	Constitution of India	1	0	0	0
Total			18	0	6	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II B.Tech (II Sem)**Branch/Specialization: Civil Engineering**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS202	Probability, Statistics and Numerical Methods	3	1	0	4
2	CE210	Strength of Materials-II	3	0	0	3
3	CE211	Hydraulics and Hydraulic Machinery	3	0	0	3
4	HS207	Business Economics & Financial Analysis	3	0	0	3
5	ES201	Basic Electrical and Electronics Engineering	3	0	0	3
6	CE212	Fluid Mechanics & Hydraulic Machinery Lab	0	0	2	1
7	ES202	Basic Electrical and Electronics Engineering Lab	0	0	2	1
8	HS206	Verbal Communications and Soft Skills Lab	0	0	2	1
9	CE213	Real time Research Project / Field Based Project	0	0	4	2
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			17	1	8	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch/Specialization: Civil Engineering**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CE301	Structural Engineering-I (RCC)	3	0	0	3
2	CE302	Structural Analysis-I	3	0	0	3
3	CE303	Geotechnical Engineering	3	0	0	3
4	CE305	Transportation Engineering	3	0	0	3
5		Open Elective – 1 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	CE309	(a) Advanced Structural Analysis				
	CE310	(b) Remote Sensing & GIS				
	CE311	(c) Project Planning and Control				
	CE312	(d) Rock Mechanics				
7	CE307	Surveying Lab-II	0	0	2	1
8	CE306	Transportation Engineering Lab	0	0	2	1
9	CE304	Geotechnical Engineering Lab	0	0	2	1
10	CE308	Computer Aided Drafting Lab	0	0	2	1
Total			18	0	6	22

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)
Branch/Specialization: Civil Engineering

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CE313	Structural Engineering - II (Steel Structures)	3	0	0	3
2	CE314	Structural Analysis-II	3	0	0	3
3	CE315	Environmental Engineering	3	0	0	3
4		Open Elective – 2 (See Annexure – B1)	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CE317	(a) Prestressed Concrete				
	CE318	(b) Elements of Earth Quake Resistant Design of Buildings.				
	CE319	(c) Air Pollution Control				
	CE320	(d) Advanced Concrete Technology				
6	CE316	Environmental Engineering Lab	0	0	2	1
7	HS301	Advanced English Communication Skills Lab	0	0	2	1
8	CE321	Industry Oriented Mini Project/Summer Internship	0	0	4	2
9	MC301	Intellectual Property Rights	0	0	2	0
Total			17	0	10	19

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IV B.Tech (I Sem)
Branch/Specialization: Civil Engineering

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CE401	Water Resources Engineering	3	0	0	3
2	CE402	Foundation Engineering	3	0	0	3
3		Open Elective – 3 (See Annexure – B1)	3	0	0	3
		Professional Elective – 3				
4	CE403	(a) Ground Improvement Techniques	3	0	0	3
	CE404	(b) Watershed Management				
	CE405	(c) Advanced Structural Design				
	CE406	(d) Construction Technology and Management				
5		Professional Elective – 4	3	0	0	3
	CE407	(a) Repairs, Retrofitting, & Rehabilitation of Structures.				
	CE408	(b) Irrigation and Hydraulic Structures				
	CE409	(c) Finite Element Analysis				
	CE410	(d) Ground Water Management.				
6	CE411	Civil Engineering Software Lab	0	0	2	1
7	CE412	Computer Aided Design Lab	0	0	2	1
8	CE413	Project Work Stage – I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

IV B.Tech (II Sem)**Branch/Specialization: Civil Engineering**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CE414	Quantity Survey & Valuation	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CE415	(a)Solid Waste Management				
	CE416	(b) Reinforced Concrete Design- II				
	CE417	(c)Environmental Impact Assessment				
	CE418	(d)Foundation Analysis And Design				
3		Professional Elective – 6	3	0	0	3
	CE419	(a)Urban Transportation Planning				
	CE420	(b)Structural health monitoring				
	CE421	(c)Green building technology				
	CE422	(d) Airports, Railways and Waterways				
4	CE423	Project Work Stage – II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

B.Tech - Mechanical Engineering Course Structure**I B.Tech (I Sem)****Branch/Specialization: MECHANICAL ENGINEERING**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	ES106	Programming for Problem Solving*	2	0	4	4
4	ES108	Computer Aided Engineering Graphics	1	0	4	3
5	ES109	Elements of Mechanical Engineering	0	0	2	1
6	HS104	Applied Physics Lab	0	0	3	1.5
7	ES114	Engineering Workshop	1	0	3	2.5
8	MC101	Environmental Science	1	0	0	0
Total			11	2	16	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****I B.Tech (II Sem)****Branch/Specialization: MECHANICAL ENGINEERING**

S. No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES107	Python Programming*	2	0	2	3
5	ES110	Engineering Mechanics	2	1	0	3
6	HS106	Engineering Chemistry Lab	0	0	2	1
7	HS108	English Language and Communication Skills Lab	0	0	2	1
8	ES116	Fuels & Lubricants Lab	0	0	2	1
9	MC102	Morals and Ethics	1	0	0	0
Total			13	3	8	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****II B.Tech (I Sem)****Branch/Specialization: MECHANICAL ENGINEERING**

S. No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS203	Probability, Statistics and Complex Variables	3	1	0	4
2	ME201	Mechanics of Solids	3	0	0	3
3	ME202	Metallurgy & Material Science	3	0	0	3
4	ME204	Production Technology	3	0	0	3
5	ME206	Engineering Thermodynamics	3	0	0	3
6	ME207	Engineering Materials	2	0	0	2
7	ME203	Material Science & Mechanics of Solids Lab	0	0	2	1
8	ME205	Production Technology Lab	0	0	2	1
9	ME208	Computer Aided Machine Drawing	0	0	2	1
10	MC201	Constitution of India	1	0	0	0
Total			18	1	6	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

II B.Tech (II Sem)
Branch/Specialization: MECHANICAL ENGINEERING

S. No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	ES201	Basic Electrical and Electronics Engineering	3	0	0	3
2	HS207	Business Economics & Financial Analysis	3	0	0	3
3	ME209	Kinematics of Machinery	3	0	0	3
4	ME210	Fluid Mechanics & Hydraulic Machines	3	0	0	3
5	ME212	IC Engines & Gas Turbines	3	0	0	3
6	ES202	Basic Electrical and Electronics Engineering Lab	0	0	2	1
7	HS206	Verbal Communication and Soft Skill Lab	0	0	2	1
8	ME211	Fluid Mechanics & Hydraulic Machines Lab	0	0	2	1
9	ME213	Real time Research Project /Field-Based Project	0	0	4	2
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			15	0	12	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
III B.Tech (I Sem)
Branch/Specialization: MECHANICAL ENGINEERING

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	ME301	Dynamics of Machinery	3	0	0	3
2	ME303	Design of Machine Elements	3	0	0	3
3	ME304	Metrology & Machine Tools	3	0	0	3
4	ME306	Steam Power and Jet Propulsion	2	0	0	2
5		Open Elective – 1 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	ME308	(a) Automobile Engineering				
	ME309	(b) Composite Materials				
	ME310	(c) Production Planning & Control				
	ME311	(d) Re-Engineering				
7	ME302	Kinematics & Dynamics Lab	0	0	2	1
8	ME305	Metrology & Machine Tools Lab	0	0	2	1
9	ME307	Thermal Engineering Lab	0	0	2	1
Total			17	0	6	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

III B.Tech (II Sem)
Branch/Specialization: MECHANICAL ENGINEERING

S. No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	ME312	Machine Design	3	0	0	3
2	ME313	Heat Transfer	3	0	0	3
3	ME315	Finite Element Methods	3	0	0	3
4	ME316	CAD/CAM	2	0	0	2
5		Open Elective – 2 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 2	3	0	0	3
	ME317	(a) Power Plant Engineering				
	ME318	(b) Non Conventional Energy Sources				
	ME319	(c) Mechanical Vibration				
	ME320	(d) Electric and Hybrid Vehicles				
7	HS301	Advanced English Communication Skills Lab	0	0	2	1
8	ME314	Heat Transfer Lab	0	0	2	1
9	ME321	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2
10	MC301	Intellectual Property Rights	1	0	0	0
Total			18	0	8	21

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IV B.Tech (I Sem)
Branch/Specialization: MECHANICAL ENGINEERING

S. No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	ME401	Refrigeration & Air Conditioning	3	0	0	3
2	ME402	Instrumentation and Control Systems	3	0	0	3
3		Open Elective – 3 (See Annexure – B1)	3	0	0	3
4		Professional Elective – 3	3	0	0	3
	ME404	(a) Artificial Intelligence in Mechanical Engineering				
	ME405	(b) Industrial Robotics				
	ME406	(c) Additive Manufacturing				
	ME407	(d) Total Quality Management				
5		Professional Elective – 4	3	0	0	3
	ME408	(a) Computational Fluid Dynamics				
	ME409	(b) Turbo Machinery				
	ME410	(c) Operations Research				
	CS210	(d) Database Management Systems				
6	ME403	Instrumentation and Control Systems Lab	0	0	2	1
7	ME411	CAD/CAM Lab	0	0	2	1
8	ME412	Project Work Stage-I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	ME413	Industrial Management	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	ME414	(a) Unconventional Machining Processes				
	ME415	(b) Mechatronics				
	ME416	(c) Fluid Power System				
	ME417	(d) Energy Conservation and Management				
3		Professional Elective – 6	3	0	0	3
	ME418	(a) Automation in Manufacturing				
	ME419	(b) Advanced Materials				
	ME420	(c) Tribology				
	ME421	(d) Alternate Fuels				
4	ME422	Project Work Stage-II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

B.Tech - Electronics and Communication Engineering Course Structure

I B.Tech (I Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	HS107	English for skill Enhancement	2	0	0	2
4	ES106	Programming for Problem Solving*	2	0	4	4
5	HS104	Applied Physics Lab	0	0	3	1.5
6	HS108	English Language and Communication Skills Lab	0	0	2	1
7	ES113	Engineering Workshop Practice	0	0	3	1.5
8	MC101	Environmental Science	1	0	0	0
Total			11	2	12	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

I B.Tech (II Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	ES101	Basic Electrical Engineering	2	0	0	2
4	ES103	Electronic Devices and Circuits	2	0	0	2
5	ES107	Python Programming*	2	0	2	3
6	ES108	Computer Aided Engineering Graphics	1	0	4	3
7	HS106	Engineering Chemistry Lab	0	0	2	1
8	ES102	Basic Electrical Engineering Lab	0	0	2	1
9	ES104	Electronic Devices and Circuits Lab	0	0	2	1
10	MC102	Morals and Ethics	1	0	0	0
Total			14	2	12	21

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

II B.Tech (I Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS205	Complex Variables and Laplace , Fourier Transforms	3	1	0	4
2	EC201	Analog Circuits	3	0	0	3
3	EC203	Digital Logic Design	3	0	0	3
4	EC205	Signals and Systems	3	1	0	4
5	EC207	Network Analysis and Synthesis	3	0	0	3
6	EC202	Analog Circuits Lab	0	0	2	1
7	EC204	Digital Logic Design Lab	0	0	2	1
8	EC206	Basic Simulation Lab	0	0	2	1
9	HS206	Verbal Communication & Soft Skills Lab	0	0	2	1
10	MC201	Constitution of India	1	0	0	0
Total			16	2	8	21

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II B.Tech (II Sem)**Branch/Specialization: ECE**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC208	Probability Theory and Stochastic Processes	3	0	0	3
2	EC209	Electronic Circuit Analysis	3	0	0	3
3	EC211	Linear and Digital IC Applications	3	0	0	3
4	EC213	Analog and Digital Communications	3	0	0	3
5	EC215	Electromagnetic Fields and Transmission Lines	3	0	0	3
6	EC210	Electronic Circuit Analysis Lab	0	0	2	1
7	EC212	Linear and Digital IC Applications Lab	0	0	2	1
8	EC214	Analog and Digital Communications Lab	0	0	2	1
9	EC217	Real time / Field Based Research Project	0	0	4	2
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			15	0	12	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch/Specialization: ECE**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC301	Microprocessors & Microcontrollers	3	0	0	3
2	EC303	Data Communication & Network	3	0	0	3
3	EC305	Control Systems	3	0	0	3
4	HS207	Business Economics & Financial Analysis	3	0	0	3
5		Professional Elective – 1	3	0	0	3
	EC306	(a) Electronic Measurements & Instrumentation				
	CS220	(b) Computer Organization & Operating Systems				
	EC307	(c) Electronic Packaging				
	EC308	(d) Embedded System Design				
6		Open Elective – 1	3	0	0	3
		(See Annexure – B1)				
7	EC302	Microprocessors & Microcontrollers Lab	0	0	2	1
8	EC304	Data Communication & Network Lab	0	0	2	1
9	HS301	Advanced English communication skills Lab	0	0	2	1
10	MC301	Intellectual property Rights	1	0	0	0
Total			19	0	6	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC309	Digital Signal Processing	3	0	0	3
2	EC311	CMOS VLSI Design	3	0	0	3
3	EC313	Antennas and Wave Propagation	3	0	0	3
4		Open Elective – 2	3	0	0	3
		(See Annexure – B1)				
5		Professional Elective – 2	3	0	0	3
		EC315 (a) Digital Image Processing				
		EC316 (b) Mobile communications and Networks				
		EC317 (c) Hardware-Software Co-Design				
		EC318 (d) Nano Electronics				
6	EC310	Digital signal processing lab	0	0	2	1
7	EC312	CMOS VLSI Design Lab	0	0	2	1
8	EC314	Advanced Communication Lab	0	0	2	1
9	EC319	Industry Oriented Mini Project / Internship	0	0	4	2
Total			15	0	10	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

IV B.Tech (I Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC401	Microwave & Optical Communications	3	0	0	3
2	EC403	IoT Architectures and Protocols	3	0	0	3
3		Open Elective – 3	3	0	0	3
		(See Annexure – B1)				
4		Professional Elective – 3	3	0	0	3
		EC405 (a) Radar Systems				
		EC406 (b) CMOS Analog IC Design				
		EC407 (c) Artificial Neural Networks				
		EC408 (d) 5G Communication & MIMO				
5		Professional Elective – 4	3	0	0	3
		EC409 (a) Network security and cryptography				
		EC410 (b) Satellite Communications				
		EC411 (c) Bio medical Instrumentation				
		EC412 (d) FPGA based system design				
6	EC402	Microwave & Optical Communications Lab	0	0	2	1
7	EC404	IoT Architectures and Protocols Lab	0	0	2	1
8	EC413	Project Work Stage I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

IV B.Tech (II Sem)

Branch/Specialization: ECE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC414	MOOCS :(Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	EC415	(a) 5G and beyond Communication				
	CS308	(b) Artificial Intelligence				
	CS315	(c) Machine Learning				
	EC416	(d) Test & Testability				
3		Professional Elective – 6	3	0	0	3
	EC417	(a) System on Chip Architecture				
	EC418	(b) Wireless sensor Networks				
	EC419	(c) Multimedia Database Management Systems				
	EC420	(d) Low Power VLSI				
4	EC421	Project Work Stage-II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

B.Tech - Computer Science and Engineering Course Structure

I B.Tech (I Sem)

Branch / Specialization: CSE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES106	Programming for Problem Solving*	2	0	4	4
5	ES108	Computer Aided Engineering Graphics	1	0	4	3
6	ES115	IT Workshop	0	0	2	1
7	HS106	Engineering Chemistry Lab	0	0	2	1
8	HS108	English Language and Communication Skills Lab	0	0	2	1
9	MC102	Morals and Ethics	1	0	0	0
Total			12	2	14	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

I B.Tech (II Sem)

Branch / Specialization: CSE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	ES101	Basic Electrical Engineering	2	0	0	2
4	ES103	Electronic Device and Circuits	2	0	0	2
5	ES107	Python Programming*	2	0	2	3
6	HS104	Applied Physics Lab	0	0	3	1.5
7	ES105	Electrical and Electronics Engg. Lab	0	0	2	1
8	ES113	Engineering Workshop Practice	0	0	3	1.5
9	MC101	Environmental Science	1	0	0	0
Total			13	2	10	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

II B.Tech (I Sem)

Branch / Specialization: CSE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC216	Digital Electronics	3	0	0	3
2	CS201	Data Structures	3	0	0	3
3	CS203	Object Oriented Programming through Java	3	0	0	3
4	CS205	Discrete Mathematics	3	0	0	3
5	CS206	Computer Organization and Architecture	3	0	0	3
6	CS202	Data Structures Lab	0	0	2	1
7	CS204	Object Oriented Programming through Java Lab	0	0	2	1
8	CS207	Data Visualization Techniques using R / Power BI Lab	0	0	4	2
9	HS206	Verbal Communication and Soft Skills Lab	0	0	2	1
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			15	0	12	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II B.Tech (II Sem)**Branch / Specialization: CSE**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS201	Probability and Statistics	3	1	0	4
2	HS207	Business Economics & Financial Analysis	3	0	0	3
3	CS208	Operating Systems	3	0	0	3
4	CS210	Database Management Systems	3	0	0	3
5	CS212	Design and Analysis of Algorithms	3	0	0	3
6	CS209	Operating Systems Lab	0	0	2	1
7	CS211	Database Management Systems Lab	0	0	2	1
8	CS213	Node JS / React JS / Django	0	0	2	1
9	CS222	Real Time Research Project / Societal Related Project	0	0	4	2
10	MC201	Constitution of India	1	0	0	0
Total			16	1	10	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch / Specialization: CSE**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS301	Software Engineering	3	0	0	3
2	CS302	Computer Networks	3	0	0	3
3	CS304	Data Mining	3	0	0	3
4	CS306	DevOps	3	0	0	3
5		Open Elective – 1 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	CS308	(a) Artificial Intelligence				
	CS310	(b) Distributed Systems				
	CS311	(c) Image Processing				
	CS312	(d) Web Programming				
	CS313	(e) Data Analytics				
7	CS305	Data Mining Lab	0	0	2	1
8	CS307	DevOps Lab	0	0	2	1
9	HS301	Advanced English Communication Skills Lab	0	0	2	1
10	MC301	Intellectual Property Rights	0	0	2	0
Total			18	0	8	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)
Branch / Specialization: CSE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS315	Machine Learning	3	0	0	3
2	CS317	Formal Languages and Automata Theory	3	0	0	3
3	CS318	Big Data Analytics	3	0	0	3
4		Open Elective – 2 (See Annexure – B1)	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CS320	(a) Distributed Databases				
	CS321	(b) Information Retrieval Systems				
	CS322	(c) Fundamentals of IoT & Robotics				
	CS323	(d) Natural Language Processing				
	CS325	(e) Cloud Computing				
6	CS316	Machine Learning Lab	0	0	2	1
7	CS319	Big Data Analytics Using R / Power BI Lab	0	0	2	1
8	CS326	UI Design - Flutter	0	0	2	1
9	CS343	Industrial Oriented Mini Project / Summer Internship	0	0	4	2
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IV B.Tech (I Sem)
Branch / Specialization: CSE

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS401	Cryptography and Network Security	3	0	0	3
2	CS403	Compiler Design	3	0	0	3
3		Open Elective – 3 (See Annexure – B1)	3	0	0	3
4		Professional Elective – 3	3	0	0	3
	CS405	(a) Web and Data Base Security				
	CS406	(b) Full Stack Development				
	CS407	(c) Scripting Languages				
	CS408	(d) Block Chain technology				
	CS409	(e) Software Testing Methodology				
5		Professional Elective – 4	3	0	0	3
	CS410	(a) Computer Vision and Robotics				
	CS411	(b) Advanced Operating Systems				
	CS412	(c) Cyber Security				
	CS414	(d) Pattern Recognition				
	CS415	(e) Mobile Application Development				
6	CS402	Cryptography and Network Security Lab	0	0	2	1
7	CS404	Compiler Design Lab	0	0	2	1
8	CS416	Project Work Stage – I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS417	MOOCS:(Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CS418	(a) Agile Software Development				
	CS419	(b) Adhoc & Sensor Networks				
	CS420	(c) Software Process & Project Management				
	CS421	(d) Soft Computing				
	CS422	(e) Network Programming				
3		Professional Elective – 6	3	0	0	3
	CS423	(a) Deep Learning				
	CS425	(b) Cyber Forensics				
	CS426	(c) Semantic Web				
	CS427	(d) Human Computer Interaction				
	CS428	(e) Quantum Computing				
4	CS478	Project Work Stage – II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

B.Tech - Computer Science and Engineering (Artificial Intelligence and Machine Learning)
Course Structure

I B.Tech (I Sem)

Branch/Specialization: CSE (AI&ML)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	ES101	Basic Electrical Engineering	2	0	0	2
4	ES103	Electronic Devices and Circuits	2	0	0	2
5	ES106	Programming for Problem Solving*	2	0	4	4
6	HS104	Applied Physics Lab	0	0	3	1.5
7	ES105	Electrical and Electronics Engg. Lab	0	0	2	1
8	ES113	Engineering Workshop Practice Lab	0	0	3	1.5
9	MC102	Morals and Ethics	1	0	0	0
Total			13	2	12	20

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

***Integrated Course (Theory & Lab)**

I B.Tech (II Sem)

Branch/Specialization: CSE (AI&ML)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES107	Python Programming*	2	0	2	3
5	ES108	Computer Aided Engineering Graphics	1	0	4	3
6	HS106	Engineering Chemistry Lab	0	0	2	1
7	HS108	English Language and Communication Skills Lab	0	0	2	1
8	ES115	IT Workshop	0	0	2	1
9	MC101	Environmental Science	1	0	0	0
Total			12	2	12	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

***Integrated Course (Theory & Lab)**

II B.Tech (I Sem)

Branch/Specialization: CSE (AIML)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS204	Mathematical and Statistical Foundations	3	1	0	4
2	EC216	Digital Electronics	3	0	0	3
3	CS206	Computer Organization and Architecture	3	0	0	3
4	CS214	Data Structures with Python	3	0	0	3
5	CS301	Software Engineering	3	0	0	3
6	CS208	Operating Systems	3	0	0	3
7	CS215	Data Structures with Python Lab	0	0	2	1
8	CS209	Operating Systems Lab	0	0	2	1
9	MC202	Gender Sensitization Lab	0	0	2	0
Total			18	1	6	21

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II B.Tech (II Sem)**Branch/Specialization: CSE (AIML)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS203	Object Oriented Programming through Java	3	0	0	3
2	CS205	Discrete Mathematics	3	0	0	3
3	CS308	Artificial Intelligence	3	0	0	3
4	CS210	Database Management Systems	3	0	0	3
5	CS317	Formal Languages and Automata Theory	3	0	0	3
6	CS204	Java Programming Lab	0	0	2	1
7	CS211	Database Management Systems Lab	0	0	2	1
8	HS206	Verbal Communication and Soft Skills Lab	0	0	2	1
9	CS222	Real time research project/societal related project	0	0	4	2
10	MC201	Constitution of India	1	0	0	0
Total			16	0	10	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch/Specialization: CSE(AIML)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS207	Business Economics & Financial Analysis	3	0	0	3
2	CS302	Computer Networks	3	0	0	3
3	CS315	Machine Learning	3	0	0	3
4	CS403	Compiler Design	3	0	0	3
5		Open Elective – 1 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	CS304	(a) Data Mining				
	CS312	(b) Web Programming				
	CS317	(c) Image Processing				
	CS325	(d) Cloud Computing				
	CS328	(e) Computer Graphics				
7	CS303	Computer Networks Lab	0	0	2	1
8	CS315	Machine Learning Lab	0	0	2	1
9	CS213	Node JS/React JS/Django	0	0	2	1
10	MC301	Intellectual Property Rights	1	0	0	0
Total			19	0	6	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)
Branch/Specialization: CSE (AIML)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS212	Design and Analysis of Algorithms	3	0	0	3
2	CS313	Data Analytics	3	0	0	3
3	CS323	Natural Language Processing	3	0	0	3
4		Open Elective – 2 (See Annexure – B1)	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CS321	(a) Information Retrieval Systems				
	CS327	(b) Data Ware Housing and Business Intelligence				
	CS333	(c) Medical Intelligence				
	CS409	(d) Software Testing Methodologies				
	CS410	(e) Computer Vision and Robotics				
6	HS301	Advanced English Communication Skills Lab	0	0	2	1
7	CS314	Data Analytics Lab	0	0	2	1
8	CS324	Natural Language Processing Lab	0	0	2	1
9	CS343	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IVB.Tech (I Sem)
Branch/Specialization: CSE (AIML)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS423	Deep Learning	3	0	0	3
2	CS444	Reinforcement Learning	3	0	0	3
3		Open Elective-3 (See Annexure – B1)	3	0	0	3
4		Professional Elective – 3	3	0	0	3
	CS427	(a) Human Computer Interaction				
	CS436	(b) Internet of Things				
	CS407	(c) Scripting Languages				
	CS415	(d) Mobile Application Development				
	CS445	(e) Speech and Language Processing using Deep Learning				
5		Professional Elective – 4	3	0	0	3
	CS426	(a) Semantic Web				
	CS428	(b) Quantum Computing				
	CS447	(c) Expert Systems				
	CS448	(d) Mobile Computing				
	CS449	(e) Applied Data Science with Python				
6	CS424	Deep Learning Lab	0	0	2	1
7	CS326	UI Design-Flutter	0	0	2	1
8	CS416	Project Work Stage-I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS417	MOOCS (Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CS419	(d) Ad-hoc & Sensor Networks				
	CS458	(c) Web Security				
	CS469	(a) Social Network Analysis				
	CS470	(b) Federated Machine Learning				
	CS450	(e) Augmented Reality & Virtual Reality				
3		Professional Elective – 6	3	0	0	3
	CS471	(a) Speech and Video Processing				
	CS472	(b) Robotic Process Automation				
	CS473	(c) Randomized Algorithms				
	CS474	(d) Conversational AI				
	CS475	(e) Statistical Natural Language Processing				
4	CS478	Project Work Stage-II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

B.Tech - Computer Science and Engineering (Cyber Security) Course Structure**I B.Tech (I Sem)****Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	ES101	Basic Electrical Engineering	2	0	0	2
4	ES103	Electronic Devices and Circuits	2	0	0	2
4	ES106	Programming for Problem Solving*	2	0	4	4
5	HS106	Engineering Chemistry Lab	0	0	2	1
6	ES105	Electrical and Electronics Engg. Lab	0	0	2	1
7	MC102	Morals and Ethics	1	0	0	0
Total			13	2	8	18

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****I B.Tech (II Sem)****Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES107	Python Programming*	2	0	2	3
5	ES108	Computer Aided Engineering Graphics	1	0	4	3
6	HS104	Applied Physics Lab	0	0	3	1.5
7	HS108	English Language and Communication Skills Lab	0	0	2	1
8	ES113	Engineering Workshop Practice	0	0	3	1.5
9	ES115	IT Workshop	0	0	2	1
10	MC101	Environmental Science	1	0	0	0
Total			12	2	16	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****II B.Tech (I Sem)****Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	EC216	Digital Electronics	3	0	0	3
2	CS203	Object Oriented Programming through Java	3	0	0	3
3	CS205	Discrete Mathematics	3	0	0	3
4	CS206	Computer Organization and Architecture	3	0	0	3
5	CS214	Data Structures with Python	3	0	0	3
6	CS204	Object Oriented Programming using Java Lab	0	0	2	1
7	CS207	Data Visualization -R/Power BI Lab	0	0	4	2
8	CS215	Data Structures with Python Lab	0	0	2	1
9	HS206	Verbal Communications and Soft Skills Lab	0	0	2	1
10	MC201	Constitution of India	1	0	0	0
Total			16	0	10	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

II B.Tech (II Sem)**Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS201	Probability and Statistics	3	1	0	4
2	HS207	Business Economics & Financial Analysis	3	0	0	3
3	CS208	Operating Systems	3	0	0	3
4	CS210	Database Management Systems	3	0	0	3
5	CS302	Computer Networks	3	0	0	3
6	CS209	Operating Systems Lab	0	0	2	1
7	CS211	Database Management Systems Lab	0	0	2	1
8	CS213	Node JS/React JS/ Django	0	0	2	1
9	CS222	Real time / Field Based Research Project	0	0	4	2
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			15	1	12	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS212	Design and Analysis of Algorithms	3	0	0	3
2	CS301	Software Engineering	3	0	0	3
3	CS331	Cyber Crime Investigation and Digital Forensics	3	0	0	3
4	CS401	Cryptography and Network Security	3	0	0	3
5		Open Elective – 1 (See Annexure-B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	CS304	(a) Data Mining				
	CS308	(b) Artificial Intelligence				
	CS329	(c) Introduction to Cyber Laws				
	CS330	(d) Malware Analysis				
	CS403	(e) Compiler Design				
7	CS326	UI Design-Flutter	0	0	2	1
8	CS332	Cyber Crime Investigation and Digital Forensics Lab	0	0	2	1
9	CS402	Cryptography and Network Security Lab	0	0	2	1
Total			18	0	6	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)**Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS338	Data Compression and Encryption	3	0	0	3
2	CS412	Cyber Security	3	0	0	3
3	CS415	Mobile Application Development	3	0	0	3
4		Open Elective – 2 (See Annexure – B1)	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CS310	(a) Distributed Systems				
	CS313	(b) Data Analytics				
	CS317	(c) Formal Languages and Automata Theory				
	CS337	(d) Ethical Hacking				
CS339	(e) Digital Watermarking and Steganography					
6	HS301	Advanced English Communication Skills Lab	0	0	2	1
7	CS413	Cyber Security Lab	0	0	2	1
8	CS416	Mobile Application Development Lab	0	0	2	1
9	CS343	Industry Oriented Mini Project / Summer Internship	0	0	4	2
10	MC301	Intellectual Property Rights	1	0	0	0
Total			16	0	10	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****IV B.Tech (I Sem)****Branch/Specialization: CSE (CS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS437	Vulnerability Assessment & Penetration Testing	3	0	0	3
2	CS439	Network Management Systems and Operations	3	0	0	3
3		Open Elective- 3 (Annexure-B1)	3	0	0	3
4		Professional Elective – 3	3	0	0	3
	CS306	(a) Dev Ops				
	CS315	(b) Machine Learning				
	CS408	(c) Block Chain Technology				
	CS441	(d) Mobile Application Security				
CS442	(e) Web Application Security					
5		Professional Elective – 4	3	0	0	3
	CS325	(a) Cloud Computing				
	CS405	(b) Web and Database Security				
	CS418	(c) Agile Software Development				
	CS420	(d) Software Process and Project Management				
CS443	(e) Computer Security & Audit Assurance					
6	CS438	Vulnerability Assessment & Penetration Testing Lab	0	0	2	1
7	CS440	Network Management Systems and Operations Lab	0	0	2	1
8	CS416	Project Work Stage – I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

IV B.Tech (II Sem)

Branch/Specialization: CSE (CS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS417	MOOCS (Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CS460	(a) Social Media Security				
	CS461	(b) Data Analytics for Fraud Detection				
	CS462	(c) Authentication Techniques				
	CS463	(d) Security Incident & Response Management(SOC)				
	CS464	(e) Secure Software Engineering				
3		Professional Elective – 6	3	0	0	3
	CS436	(a) Internet of Things				
	CS465	(b) Cloud security				
	CS466	(c) IoT Cloud Processing and Analytics				
	CS467	(d) Quantum Cryptography				
	CS468	(e) 5G Technologies				
4	CS478	Project Work Stage-II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

B.Tech - Computer Science and Engineering (Data Science) Course Structure

I B.Tech (I Sem)

Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	ES101	Basic Electrical Engineering	2	0	0	2
4	ES103	Electronic Devices and Circuits	2	0	0	2
4	ES106	Programming for Problem Solving*	2	0	4	4
5	HS106	Engineering Chemistry Lab	0	0	2	1
6	ES105	Electrical and Electronics Engg. Lab	0	0	2	1
7	MC102	Morals and Ethics	1	0	0	0
Total			12	2	8	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

I B.Tech (II Sem)

Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES107	Python Programming*	2	0	2	3
5	ES108	Computer Aided Engineering Graphics	1	0	4	3
6	HS104	Applied Physics Lab	0	0	3	1.5
7	HS108	English Language and Communication Skills Lab	0	0	2	1
8	ES113	Engineering Workshop Practice	0	0	3	1.5
9	ES115	IT Workshop	0	0	2	1
10	MC101	Environmental Science	1	0	0	0
Total			12	2	16	21

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

*Integrated Course (Theory & Lab)

II B.Tech (I Sem)

Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS201	Probability and Statistics	3	1	0	4
2	EC216	Digital Electronics	3	0	0	3
3	CS206	Computer Organization and Architecture	3	0	0	3
4	CS210	Database Management Systems	3	0	0	3
5	CS214	Data Structures with Python	3	0	0	3
6	CS216	Data Science	3	0	0	3
7	CS211	Database Management Systems Lab	0	0	2	1
8	CS215	Data structures with Python Lab	0	0	2	1
9	MC201	Constitution of India	1	0	0	0
Total			19	1	4	21

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II B.Tech (II Sem)**Branch/Specialization:CSE (DS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS207	Business Economics & Financial Analysis	3	0	0	3
2	CS203	Object Oriented Programming through Java	3	0	0	3
3	CS205	Discrete Mathematics	3	0	0	3
4	CS208	Operating Systems	3	0	0	3
5	CS317	Formal Language and Automata Theory	3	0	0	3
6	CS204	Object Oriented Programming using Java Lab	0	0	2	1
7	CS209	Operating System Lab	0	0	2	1
8	CS222	Real Time / Field Based Research Project	0	0	4	2
9	HS206	Verbal Communications and Soft Skills Lab	0	0	2	1
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			15	0	12	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****III B.Tech (I Sem)****Branch/Specialization:CSE (DS)**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS212	Design and Analysis of Algorithms	3	0	0	3
2	CS302	Computer Networks	3	0	0	3
3	CS304	Data Mining	3	0	0	3
4	CS318	Big Data Analytics	3	0	0	3
5		Open Elective-1 (See Annexure – B1)	3	0	0	3
6		Professional Elective – 1	3	0	0	3
	CS301	(a) Software Engineering				
	CS311	(b) Image Processing				
	CS327	(c) Data Warehousing and Business Intelligence				
	CS328	(d) Computer Graphics				
	CS423	(e) Deep Learning				
7	CS305	Data Mining Lab	0	0	2	1
8	CS319	Big Data Analytics Lab	0	0	2	1
9	CS326	UI Design- Flutter	0	0	2	1
Total			18	0	6	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)
Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS308	Artificial Intelligence	3	0	0	3
2	CS315	Machine Learning	3	0	0	3
3	CS325	Cloud Computing	3	0	0	3
4		Open Elective – 2 (See Annexure – B1)	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CS321	(a) Information Retrieval Systems				
	CS323	(b) Natural Language Processing				
	CS336	(c) Spatial and Multimedia Databases				
	CS337	(d) Ethical Hacking				
	CS410	(e) Computer Vision and Robotics				
6	CS309	Artificial Intelligence Lab	0	0	2	1
7	CS316	Machine Learning Lab	0	0	2	1
8	HS301	Advanced English Communication Skills Lab	0	0	2	1
9	CS343	Industry Oriented Mini Project / Summer Internship	0	0	4	2
10	MC301	Intellectual Property Rights	1	0	0	0
Total			16	2	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IV B.Tech (I Sem)
Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS430	Web and Social Media Analytics	3	0	0	3
2	CS476	Data Visualization and Exploration with R	3	0	0	3
3		Open Elective -3 (See Annexure – B1)	3	0	0	3
4		Professional Elective – 3	3	0	0	3
	CS401	(a) Cryptography and Network Security				
	CS403	(b) Compiler Design				
	CS407	(c) Scripting Languages				
	CS415	(d) Mobile Application Development				
	CS432	(e) Financial Analytics				
5		Professional Elective – 4	3	0	0	3
	CS428	(a) Quantum Computing				
	CS433	(b) Predictive Analytics				
	CS434	(c) Database Security				
	CS435	(d) Healthcare Data Analytics				
	CS436	(e) Internet of Things				
6	CS431	Web and Social Media Analytics Lab	0	0	2	1
7	CS477	Data Visualization and Exploration with R Lab	0	0	2	1
8	CS416	Project Work Stage – I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

IV B.Tech (II Sem)

Branch/Specialization:CSE (DS)

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS417	MOOCS (Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CS428	(a) Quantum Computing				
	CS453	(b) Privacy Preserving in Data Mining				
	CS454	(c) Exploratory Data Analysis				
	CS455	(d) Nature Inspired Computing for Data Science				
CS456	(e) Mining Massive Datasets					
3		Professional Elective – 6	3	0	0	3
	CS408	(a) Block Chain Technology				
	CS429	(b) Parallel and Distributed Computing				
	CS457	(c) Data Stream Mining				
	CS458	(d) Web Security				
CS459	(e) Video Analytics					
4	CS478	Project Work Stage-II and Seminar	0	0	22	11
Total			8	0	22	19

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

B.Tech - Artificial Intelligence and Data Science Course Structure**I B.Tech (I Sem)****Branch/Specialization: AI&DS**

S.No	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS101	Matrices and Calculus	3	1	0	4
2	HS103	Applied Physics	3	1	0	4
3	ES106	Programming for Problem Solving*	2	0	4	4
4	ES108	Computer Aided Engineering Graphics	1	0	4	3
5	HS104	Applied Physics lab	0	0	3	1.5
6	ES113	Engineering Workshop Practice	1	0	3	1.5
7	ES115	IT Workshop	0	0	2	1
8	MC101	Environmental Science	1	0	0	0
Total			12	2	14	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****I B.Tch (II Sem)****Branch/Specialization: AI&DS**

S.No	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS102	Multivariable and Vector Calculus	3	1	0	4
2	HS105	Engineering Chemistry	3	1	0	4
3	HS107	English for Skill Enhancement	2	0	0	2
4	ES101	Basic Electrical Engineering	2	0	0	2
5	ES103	Electronic Devices and Circuits	2	0	0	2
6	ES107	Python Programming *	2	0	2	3
7	HS106	Engineering Chemistry Lab	0	0	2	1
8	HS108	English Language and Communication Skills Lab	0	0	2	1
9	ES105	Electrical and Electronics Engg. Lab	0	0	2	1
10	MC102	Morals and Ethics	1	0	0	0
Total			15	2	8	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****II B.Tech (I Sem)****Branch/Specialization: AI&DS**

S.No	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	HS204	Mathematical and Statistical Foundations	3	1	0	4
2	CS203	Object Oriented Programming Through Java	3	0	0	3
3	CS217	Data Structures & Algorithms	3	0	0	3
4	EC216	Digital Electronics	3	0	0	3
5	CS301	Software Engineering	3	0	0	3
6	CS218	Data Structures & Algorithms Lab	0	0	2	1
7	CS204	Java Programming Lab	0	0	2	1
8	CS207	Data Visualization - R / Power BI	0	0	4	2
9	HS206	Verbal Communication and Soft Skills Lab	0	0	2	1
10	MC201	Constitution of India	1	0	0	0
Total			15	1	10	21

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

II B.Tech (II Sem)**Branch/Specialization: AI&DS**

S.No	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS219	Introduction to Artificial Intelligence and Data Science	3	0	0	3
2	CS205	Discrete Mathematics	3	0	0	3
3	CS220	Computer Organization & Operating Systems	3	0	0	3
4	CS221	Machine Learning and Applications*	2	0	2	3
5	CS210	Database Management Systems	3	0	0	3
6	CS209	Operating systems Lab	0	0	2	1
7	CS211	Data base management systems lab	0	0	2	1
8	CS222	Real Time / Field Based Research Project	0	0	4	2
9	CS213	Skill Development Course Node JS/ React JS/ Django	0	0	2	1
10	MC202	Gender Sensitization Lab	0	0	2	0
Total			16	0	12	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour*****Integrated Course (Theory & Lab)****III B.Tech (I Sem)****Branch/Specialization: AI&DS**

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS423	Deep Learning	3	0	0	3
2	CS318	Big Data Analytics	3	0	0	3
3		Open Elective – 1 (See Annexure – B1)	3	0	0	3
4		Professional Elective – 1	3	0	0	3
	CS302	(a) Computer Networks				
	CS312	(b) Web Programming				
	CS333	(c) Computer Vision and Image Processing				
	CS334	(d) Medical Intelligence				
CS447	(e) Expert Systems					
5	HS207	Business Economics & Financial Analysis	3	0	0	3
6	CS424	Deep Learning Lab	0	0	2	1
7	CS319	Big Data Analytics Lab	0	0	2	1
8	CS335	ETL-Kafka/Talend	0	0	2	1
9	HS301	Advanced English Communication Skills Lab	0	0	2	1
10	MC301	Intellectual Property Rights	1	0	0	0
Total			16	1	8	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

III B.Tech (II Sem)
Branch/Specialization: AI&DS

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS323	Natural Language Processing	3	0	0	3
2	CS340	Cloud Computing and Infrastructure Services	3	0	0	3
3		Open Elective – 2 (See Annexure – B1)	3	0	0	3
4	CS317	Formal Languages and Automata Theory	3	0	0	3
5		Professional Elective – 2	3	0	0	3
	CS412	(a) Cyber security				
	CS428	(b) Quantum Computing				
	CS342	(c) Computational Neuroscience				
	CS304	(d) Data Mining				
	CS449	(e) Applied Data Science with Python				
6	CS327	Data Warehousing & Business Intelligence	3	0	0	3
7	CS324	Natural Language Processing Lab	0	0	2	1
8	CS341	Cloud Computing and Infrastructure Services Lab	0	0	2	1
9	CS343	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2
Total			18	0	8	22

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour
IVB.Tech (I Sem)
Branch/Specialization: AI&DS

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS451	Generative AI and Advances	3	0	0	3
2	CS444	Reinforcement Learning	3	0	0	3
3		Professional Elective – 3	3	0	0	3
	CS436	(a) Internet of Things				
	CS450	(b) Augmented Reality and Virtual Reality				
	CS407	(c) Scripting Languages				
	CS403	(d) Compiler Design				
	CS310	(e) Distributed systems				
4		Open Elective – 3 (See Annexure – B1)	3	0	0	3
		Professional Elective – 4	3	0	0	3
	CS414	(a) Pattern Recognition				
	CS447	(b) Expert Systems				
	CS418	(c) Agile Software Development				
	CS448	(d) Mobile Computing				
	CS408	(e) Block Chain technology				
5	CS452	Generative AI Lab	0	0	2	1
6	CS446	Speech and Language Processing Using Deep Learning Lab	0	0	2	1
7	CS416	Project Work Stage – I	0	0	6	3
Total			15	0	10	20

L: Lecture Hour
T: Tutorial Hour
P: Lab/Practice Hour

S.No.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	CS417	MOOC :(Any subject which is not 70% same of previous subjects syllabus)	2	0	0	2
2		Professional Elective – 5	3	0	0	3
	CS469	(a) Social Network Analysis				
	CS470	(b) Federated Machine Learning				
	CS458	(c) Web Security				
	CS419	(d) Ad-hoc & Sensor Networks				
	CS425	(e) Cyber Forensics				
3		Professional Elective – 6	3	0	0	3
	CS471	(a) Speech and Video Processing				
	CS472	(b) Robotic Process Automation				
	CS473	(c) Randomized Algorithms				
	CS474	(d) Conversational AI				
	CS475	(e) Statistical Natural Language Processing				
4	CS478	Project Work Stage-II and Seminar	0	0	16	11
Total			8	0	16	19

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

ANNEXURE – B1: Open Elective Courses for all B.Tech Programs

Sub code	Open Elective - 1 (III Yr I Sem)	Sub code	Open Elective – 2 (III Yr II Sem)	Sub code	Open Elective -3 (IV Yr I Sem)
OE101	Java Programming (CE, ME & ECE)	OE201	Fundamentals of Software Engineering (CE, ME & ECE)	OE301	Linux Programming (CE, ME,ECE & AI&DS)
OE102	Basics of Data Structures (CE,ME& ECE)	OE202	Introduction to Database Management Systems (CE & ECE)	OE302	Introduction to Computer Networks (CE,ME &AI&DS)
OE103	Fundamentals of AI (CE,ME & ECE)	OE203	Fundamentals of Data base Security (Except CS &CSE)	OE303	Genetic Algorithms & Fuzzy Logic (All Branches of Engg.,)
OE104	Basics of Machine Learning CE,ME & ECE)	OE204	Electronic Sensors (Except ECE)	OE304	Cyber Laws & Ethics (Except CS)
OE105	Fundamentals of Data Science (Except DS & AI&DS)	OE205	Electronics for Health Care (Except ECE)	OE305	Fundamentals of Social Networks (Except AI&DS)
OE106	Introduction to Cyber Security (Except CS,& CSE)	OE206	Introduction to Power Plant Engineering (Except ME)	OE306	Measuring instruments (Except ECE &ME)
OE107	Fundamentals of Internet of Things (CE & ME)	OE207	Quantitative analysis for Business Decisions (Except ME)	OE307	Fundamental of Robotics (ECE & CS)
OE108	Renewable Energy Sources (Except ME)	OE208	Industrial Engineering and Management (Except ME)	OE308	Entrepreneurship Development (All Branches of Engg.,)
OE109	Disaster Preparedness & PlanningManagem ent (Except CE)	OE209	Smart Cities (Except CE)	OE309	Environmental Pollution (Except CE)
OE110	Principles of Total Quality Management (Except ME)	OE210	Basics of Remote Sensing & GIS (Except CE)	OE310	Principles of Project Management (Except CE)
OE111	Solid Waste Management Techniques (Except CE)	OE211	Introduction to Environmental Impact Assessment (Except CE)	OE311	Fundamentals of Ethical Hacking (Except CS)

M.Tech – Structural Engineering Course Structure:**I M.Tech (I Sem):****Branch/Specialization: Structural Engineering**

S. No	Course Code	Course Title	L	T	P	Credits
1	MSE101	Advanced Structural Mechanics	3	0	0	3
2	MSE102	Theory of Elasticity and Plasticity	3	0	0	3
3		Professional Elective – 1:	3	0	0	3
	MSE103	1. Theory of Plates and Shells				
	MSE104	2. Computer Oriented Numerical Methods				
	MSE105	3. Structural Stability				
4		Professional Elective – II:	3	0	0	3
	MSE106	1. Advanced Reinforced Concrete Design				
	MSE107	2. Structural Health Monitoring				
	MSE108	3. Structural Optimization				
5	MSE109	Computer Aided Design Laboratory	0	1	2	2
6	MSE110	Structural Engineering Laboratory	0	1	2	2
7	RD101	Research Methodology & IPR	2	0	0	2
8		Audit Course – I (See Annexure B2)	2	0	0	0
Total			16	2	4	18

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****I M.Tech (II Sem):****Branch/Specialization: Structural Engineering**

S.No.	Course Code	Course Title	L	T	P	Credits
1	MSE111	Finite Element Analysis	3	0	0	3
2	MSE112	Structural Dynamics	3	0	0	3
3		Professional Elective - III	3	0	0	3
	MSE113	1. Advanced Structural Steel Design				
	MSE114	2. Structural Reliability				
	MSE115	3. Design of High-Rise Buildings				
4		Professional Elective - IV	3	0	0	3
	MSE116	1. Advanced Prestressed Concrete Design				
	MSE117	2. Structural Health Monitoring				
	MSE118	3. Design of Bridges				
5	MSE119	Numerical Analysis Laboratory	0	1	2	2
6	MSE120	Advanced Structural Analysis and Design Laboratory	0	1	2	2
7	MSE121	Mini Project with Seminar	0	0	4	2
8		Audit Course- II (See Annexure B2)	2	0	0	0
Total			14	2	8	18

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour**

II M.Tech(I Sem):**Branch/Specialization: Structural Engineering**

S. No	Course Code	Course Title	L	T	P	Credits
1		Professional Elective - V	3	0	0	3
	MSE122	1. Earthquake Resistant Design of Structures				
	MSE123	2. Pre-Engineered Buildings				
	MSE124	3. Rehabilitation and Retrofitting of Structures				
2		Open Elective	3	0	0	3
3	MSE125	Dissertation Work Review - II	0	0	12	6
Total			6	0	12	12

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****II M.Tech(II Sem):****Branch/Specialization: Structural Engineering**

S. No	Course Code	Course Title	L	T	P	Credits
1	MSE126	Dissertation Work Review - III	0	0	12	6
2	MSE127	Dissertation Viva-Voce	0	0	28	14
Total			0	0	40	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****Open Elective Courses Offered by the Civil Engg. Department:**

Course code	Open Electives offered by the Civil Dept.,
MOE101	Green Buildings
MOE102	Construction Project Management
MOE103	Safety and Construction Practice Regulations

M.Tech: Advanced Manufacturing Systems Course Structure

I M.Tech (I Sem):

Branch/Specialization: Advanced Manufacturing Systems

S. No	Course Code	Course Title	L	T	P	Credits
1	MAM101	Automation in Manufacturing	3	0	0	3
2	MAM102	Theory of Metal Cutting	3	0	0	3
3		Professional Elective - I	3	0	0	3
	MAM103	1. Design for Manufacturing & Assembly				
	MAM104	2. Advanced Manufacturing Processes				
	MAM105	3. Product Data Management				
4		Professional Elective - II	3	0	0	3
	MAM106	1. Optimization Techniques & Applications				
	MAM107	2. Precision Engineering				
	MAM108	3. Additive Manufacturing				
5	RD101	Research Methodology & IPR	2	0	0	2
6	MAM109	Automation Lab	0	0	4	2
7	MAM110	Advanced Manufacturing Processes & Metal Cutting Lab	0	0	4	2
8		Audit Course- I (See Annexure B2)	2	0	0	0
Total			16	0	8	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

I M.Tech (II Sem):

Branch/Specialization: Advanced Manufacturing Systems

S. No	Course Code	Course Title	L	T	P	Credits
1	MAM111	Computer Integrated Manufacturing	3	0	0	3
2	MAM112	Manufacturing Systems: Simulation Modeling & Analysis	3	0	0	3
3		Professional Elective - III	3	0	0	3
	MAM113	1. Materials Technology				
	MAM114	2. Quality Engineering in Manufacturing				
	MAM115	3. Advanced Tool Design				
4		Professional Elective - IV	3	0	0	3
	MAM116	1. Artificial Intelligence in Manufacturing				
	MAM117	2. Concurrent Engineering				
	MAM118	3. Industrial Robotics				
5	MAM119	Mini Project with Seminar	0	0	4	2
6	MAM120	Computer Integrated Manufacturing Lab	0	0	4	2
7	MAM121	Simulation of Manufacturing Systems Lab	0	0	4	2
8		Audit Course – II (See Annexure B2)	2	0	0	0
Total			14	0	12	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II M.Tech (I Sem):**Branch/Specialization: Advanced Manufacturing Systems**

S. No	Course Code	Course Title	L	T	P	Credits
1		Professional Elective - V	3	0	0	3
	MAM122	1. Production and Operations Management				
	MAM123	2. MEMS				
	MAM124	3. Flexible Manufacturing Systems				
2		Open Elective	3	0	0	3
3	MAM125	Dissertation Work Review - II	0	0	12	6
Total			6	0	12	12

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****II M.Tech (II Sem):****Branch/Specialization: Advanced Manufacturing Systems**

S. No	Course Code	Course Title	L	T	P	Credits
1	MAM126	Dissertation Work Review - III	0	0	12	6
2	MAM127	Dissertation Viva-Voce	0	0	28	14
Total			0	0	40	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****Open Elective Courses Offered by the Mechanical Engg. Department:**

Course code	Open Electives offered by the Mechanical Dept.,
MOE104	Business Analysis
MOE105	Waste to Energy
MOE106	Principles of Automation
MOE107	Artificial Neural Networks

M.Tech: Computer Science and Engineering Course Structure

I M.Tech (I Sem):

Branch/Specialization: Computer Science and Engineering

S. No	Course Code	Course Title	L	T	P	Credits
1	MCS101	Mathematical Foundations of Computer Science	3	0	0	3
2	MCS102	Advanced Data Structures	3	0	0	3
3		Professional Elective - I	3	0	0	3
	MCS103	1. Cyber Security				
	MCS104	2. Deep Learning				
	MCS105	3. Natural Language Processing				
	MCS106	4. Database Programming with PL/SQL				
4		Professional Elective - II	3	0	0	3
	MCS107	1. Applied Cryptography				
	MCS108	2. Software Quality Engineering				
	MCS109	3. Data Ware Housing & Data Mining				
	MCS110	4. Mining Massive Datasets				
5	MCS111	Advanced Data Structures Lab	0	0	4	2
6		Professional Elective - I Lab	0	0	4	2
	MCS112	1. Cyber Security Lab				
	MCS113	2. Deep Learning Lab				
	MCS114	3. Natural Language Processing Lab				
	MCS115	4. Database Programming with PL/SQL Lab				
7	RD101	Research Methodology & IPR	2	0	0	2
8		Audit Course- I (See Annexure B2)	2	0	0	0
Total			16	0	8	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

I M.Tech (II Sem):

Branch/Specialization: Computer Science and Engineering

S. No	Course Code	Course Title	L	T	P	Credits
1	MCS116	Advanced Algorithms	3	0	0	3
2	MCS117	Advanced Computer Architecture	3	0	0	3
3		Professional Elective - III	3	0	0	3
	MCS118	1. Image Processing				
	MCS119	2. Advanced Computer Networks				
	MCS120	3. Edge Analytics				
	MCS121	4. Enterprise Cloud Concepts				
4		Professional Elective - IV	3	0	0	3
	MCS122	1. Bio Informatics				
	MCS123	2. Introduction to Mechine Learning				
	MCS124	3. Robotic Process Automation				
	MCS125	4. Nature Inspired Computing				
5	MCS126	Advanced Algorithms Lab	0	0	4	2
6		Professional Elective - III Lab	0	0	4	2
	MCS127	1. Image Processing Lab				
	MCS128	2. Advanced Computer Networks Lab				
	MCS129	3. Edge Analytics Lab				
	MCS130	4. Enterprise Cloud Concepts Lab				
7	MCS131	Mini Project with Seminar	0	0	4	2
8		Audit Course- II (See Annexure B2)	2	0	0	0
Total			14	0	12	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II M.Tech (I Sem):**Branch/Specialization: Computer Science and Engineering**

S. No	Course Code	Course Title	L	T	P	Credits
1		Professional Elective - V	3	0	0	3
	MCS132	1. Big data Analytics				
	MCS133	2. High Performance Computing				
	MCS134	3. Quantum Computing				
	MCS135	4. Digital Forensics				
2		Open Elective	3	0	0	3
3	MCS136	Dissertation Work Review - II	0	0	12	6
Total			6	0	12	12

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****II M.Tech (II Sem):****Branch/Specialization: Computer Science and Engineering**

S. No	Course Code	Course Title	L	T	P	Credits
1	MCS137	Dissertation Work Review - III	0	0	12	6
2	MCS138	Dissertation Viva-Voce	0	0	28	14
Total			0	0	40	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****Open Elective Courses Offered by the Computer Science and Engineering Department:**

Course code	Open Electives offered by the Computer Science Dept.,
MOE108	IPR
MOE109	Fault Tolerance Systems
MOE110	Intrusion Detection Systems
MOE111	Digital Forensics
MOE112	Optimization Techniques
MOE113	Cyber Physical Systems
MOE114	Graph Analytics

M.Tech: VLSI & Embedded Systems

I M.Tech. (I Sem):

Branch/Specialization: VLSI & Embedded System s

S.NO	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	MVE101	Digital System Design with FPGAs	3	0	0	3
2	MVE102	ARM Microcontrollers	3	0	0	3
3		Professional Elective - I	3	0	0	3
	MVE103	1. Pattern Recognition and Machine Learning				
	MVE104	2. Embedded Sensors				
	MVE105	3. Memory Technologies				
	MVE106	4. Hardware Software Co-Design				
4		Professional Elective - II	3	0	0	3
	MVE107	1. Embedded Real Time Operating Systems				
	MVE108	2. Advanced Computer Architecture				
	MVE109	3. Communication Buses & Interfaces				
	MVE110	4. Machine Learning for Speech & Image Processing				
5	MVE111	Digital System Design with FPGAs Lab	0	0	4	2
6	MVE112	ARM Microcontrollers Lab	0	0	4	2
7	RD101	Research Methodology & IPR	2	0	0	2
8		Audit Course – I (See Annexure B2)	2	0	0	0
Total			16	0	8	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

I M.Tech. (II Sem):

Branch/Specialization: VLSI & Embedded Systems

S.NO	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	MVE113	CMOS Analog IC Design	3	0	0	3
2	MVE114	System Design with Embedded Linux	3	0	0	3
3		Professional Elective - III	3	0	0	3
	MVE115	1. IOT Architectures and System Design				
	MVE116	2. SOC Design				
	MVE117	3. Design for Testability				
	MVE118	4. CAD for VLSI				
4		Professional Elective - IV	3	0	0	3
	MVE119	1. Device Modeling				
	MVE120	2. Secure Networks				
	MVE121	3. Physical Design Automation				
	MVE122	4. Low power VLSI				
5	MVE123	CMOS Analog IC Design Lab	0	0	4	2
6	MVE124	System Design with Embedded Linux Lab	0	0	4	2
7	MVE125	Mini Project with Seminar	0	0	4	2
8		Audit Course – II (See Annexure B2)	2	0	0	0
Total			14	0	10	18

L: Lecture Hour

T: Tutorial Hour

P: Lab/Practice Hour

II M.Tech. (I Sem):**Branch/Specialization: VLSI & Embedded Systems**

S.NO	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1		Professional Elective - V	3	0	0	3
	MVE126	1. CMOS Mixed Signal Design				
	MVE127	2. Embedded Networks				
	MVE128	3. Nano Materials and Nano Technology				
	MVE129	4. VLSI signal processing				
2		Open Elective	3	0	0	3
3	MVE130	Dissertation Work Review – I & II	0	0	12	6
Total			6	0	12	12

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****II M.Tech. (II Sem):****Branch/Specialization: VLSI & Embedded Systems**

S.NO.	Course Code	Name of the Course	Contact Hours per Week			Credits
			L	T	P	
1	MVE131	Dissertation Work Review - III	0	0	12	6
2	MVE132	Dissertation Viva -Voce	0	0	28	14
Total			0	0	40	20

L: Lecture Hour**T: Tutorial Hour****P: Lab/Practice Hour****Open Elective Courses Offered by the Electronics and Communication Engg. Department:**

Course code	Open Electives offered by the Electronics and Communication Engg. Dept.,
MOE115	Business Analytics
MOE116	Industrial Safety
MOE117	Operations Research
MOE118	Cost management of Engineering Projects
MOE119	Composite Materials

Annexure B2: Audit Course I & II for all M.Tech Programs

Course Code	Audit Course I & II:
MMC101	English for Research Paper Writing
MMC102	Disaster Management
MMC103	Sanskrit for Technical Knowledge
MMC104	Value Education
MMC105	Constitution of India
MMC106	Pedagogy Studies
MMC107	Stress Management by Yoga
MMC108	Personality Development through Life Enlightenment Skills

ANNEXURE – C: Autonomous Academic Regulations (R23) of B.Tech & M.Tech programmes of AVNIET to be effective from the Academic Year 2023-24

1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)

AVN Institute of Engineering and Technology affiliated to Jawaharlal Nehru Technological University Hyderabad(JNTUH) offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under Choice Based Credit System (CBCS) with effect from the academic year **2023-24**.

2.0 Eligibility for Admission

2.1 Admission to the undergraduate(UG) programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.2 The medium of instructions for the entire undergraduate programme in Engineering & Technology will be **English** only.

3.0 B.Tech. Programme Structure

3.1 A student after securing admission shall complete the B.Tech. programme in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA \geq 5) required for the completion of the undergraduate programme and award of the B.Tech. degree.

3.2 UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

3.2.1 Semester Scheme

Each undergraduate programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks (\geq 90 instructional days) each and in each semester - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)' under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure suggested by AICTE are followed.

3.2.2 Credit Courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for Theory/ Lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for Laboratory/ Practical (P) courses.

Courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender

Sensitization Lab are mandatory courses. These courses will not carry any credits.

3.2.3 Subject Course Classification

All subjects/ courses offered for the undergraduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The Institute has followed almost all the guidelines issued by JNTUH/AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes Mathematics, Physics and Chemistry subjects
2		ES - Engineering Sciences	Includes Fundamental Engineering Subjects
3		HS – Humanities and Social Sciences	Includes subjects related to Humanities, Social Sciences and Management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. Project or UG Project or UG Major Project or Project Stage I & II
8	Integrated Courses		Includes programming courses, viz. Programming for problem solving, Python programming, etc.
8		Industry Training/ Internship/ Industry Oriented Mini-project/ Mini- Project/ Skill Development Courses	Industry Training/ Internship/ Industry Oriented Mini-Project/ Mini-Project/ Skill Development Courses
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor Courses	-	1 or 2 Credit Courses (subset of HS)

11	Mandatory Courses (MC)	-	Mandatory Courses (non-credit)
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4.0 Course Registration

4.1 A ‘faculty advisor or counselor’ shall be assigned to a group of 20 students, who will advise the students about the undergraduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.

4.2 The academic section of the college invites ‘registration forms’ from students before the beginning of the semester through ‘on-line registration’, ensuring ‘date and time stamping’. The on-line registration requests for any ‘current semester’ shall be completed before the commencement of SEEs (Semester End Examinations) of the ‘preceding semester’.

4.3 A student can apply for **on-line** registration, **only after** obtaining the ‘**written approval**’ from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with the Head of the Department, Faculty Advisor/ Counselor and the student.

4.4 A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 6 Credits based on **progress** and SGPA/ CGPA, and completion of the ‘**pre-requisites**’ as indicated for various subjects/ courses, in the department course structure and syllabus contents.

4.5 Choice for ‘**additional subjects/ courses**’, not more than any 2 subjects in any Semester, must be clearly indicated, which needs the specific approval and signature of the Faculty Advisor/Mentor/HOD.

4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.

4.7 Subject/ course options exercised through **on-line** registration are final and cannot be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any inevitable or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the Head of the Department, with due notification and time-framed schedule, within a week after the commencement of class-work for that semester.

4.8 Dropping of additional subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor ‘within a period of 15 days’ from the beginning of the current semester. A student can register the elective courses offered during the fourth year second

semester in advance, i.e one elective in third year second semester and another elective in fourth year first semester provided if he/she secures 7.0 CGPA and above up to third year first semester with no backlogs.

4.9 Open Electives: The students have to choose three Open Electives (OE-I, II & III) from the list of Open Electives given by other departments. However, the student can opt for an Open Elective subject offered by his own (parent) department, if the student has not registered and not studied that subject under any category (Professional Core, Professional Electives, Mandatory Courses etc.) offered by parent department in any semester. Open Elective subjects already studied should not repeat/should not match with any category (Professional Core, Professional Electives, Mandatory Courses etc.)of subjects even in the forthcoming semesters.

4.10 Professional Electives: The students have to choose six Professional Electives (PE-I to VI) from the list of professional electives given.

5.0 Subjects/ courses to be offered

5.1 An elective or an additional subject/ course may be offered to the students, only if a minimum of 15 students opt for it.

5.2 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).

5.3 If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for **two(or multiple) sections**.

5.4 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.

6.0 Attendance requirements:

6.1 A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (including attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization Lab) for that semester. **Two periods** of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject. This attendance should also be included in the attendance uploaded every fortnight .

6.2 Shortage of attendance in aggregate upto 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.

6.3 A stipulated fee shall be payable for condoning of shortage of attendance.

6.4 Shortage of attendance below 65% in aggregate shall in **NO** case be condoned.

6.5 Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and registration for that semester shall stand cancelled, including all academic credentials(internal marks etc.) of that semester. They will not be promoted to the next semester.They may seek re-registration for all those subjects registered in that semester in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re- registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the same set of elective subjects offered under that category.

6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 Academic Requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in Item No. 6.

7.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (14 marks out of 40 marks including minimum 35% of average Mid-Term examinations for 30 marks) in the internal examinations, not less than 35% (21 marks out of 60 marks) in the semester end examination, and a minimum of 40% (40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing ‘C’ grade or above in that subject/ course.

7.1.1 Integrated Courses: The assessment procedure in the case of integrated courses is similar to that of theory and laboratory courses. Both theory and laboratory components are evaluated each for 100 marks. But, the student is declared pass when he secures a minimum of 40% of total marks in both theory and Laboratory independently; otherwise the student has to reappear for both theory and laboratory examinations once again.

7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Real-time Research Project (or) Field Based Research Project (or) Industry Oriented Mini Project (or) Internship (or) Seminar, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Industry Oriented Mini Project/Internship, or (ii) not make a presentation of the same before the evaluation committee as per schedule, or (iii) secures less than 40% marks in Real-time ResearchProject (or) Field Based Research Project (or) Industry Oriented Mini Project (or) Internship evaluations. A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such ‘one reappearance’ evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

7.3 Promotion Rules

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to Second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 20 credits out of 39 credits i.e., about 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Second year first semester to Second year second semester	Regular course of study of second year first semester.
4	Second year second semester to Third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 48 credits out of 80 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to Third year second semester	Regular course of study of third year first semester.
6	Third year second semester to Fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 72 credits out of 121 credits i.e., about 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to Fourth year second semester	Regular course of study of fourth year first semester.

7.4 A student (i) shall register for all courses/subjects covering 160 credits as specified and

listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA ≥ 5.0 (in each semester), and CGPA ≥ 5.0 (at the end of 8 semesters), (iv) **passes all the mandatory courses**, to successfully complete the undergraduate programme. The performance of the student in these 160 credits shall be considered for the calculation of the final CGPA (**at the end of undergraduate programme**), and shall be indicated in the grade card / marks memo of IV-year II semester.

7.5 Provision for Vertical mobility:

The students are permitted to register in advance the two elective courses being offered in IV B Tech II Semester (one subject in III-II and another subject in IV-I), to enable the students to concentrate fully on the project work and also to avail full semester internship in the industry. This is applicable for those students with no backlogs and who have secured 7.0 and above CGPA up to III-I Semester as on that day. Those students who will be undergoing full semester internship during the IV B.Tech second semester are required to submit the attendance sheet and progress of the Project Work every fortnight to the HoD concerned.

7.6 If a student registers for '**extra subjects**' (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those '**extrasubjects**' (although evaluated and graded using the same procedure as that of the required 160 credits) will not be considered while calculating the SGPA and CGPA. For such '**extra subjects**' registered, percentage of marks and letter grade alone will be indicated in the grade card / marks memo as a performance measure, subject to completion of the attendance and academic requirements.

7.7 A student eligible to appear in the semester end examination for any subject/ course, but absent from it or failed (thereby failing to secure '**C**' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the (SEE) supplementary examination for evaluating performance in that subject.

7.8 A student detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements. The academic regulations under which a student has been re-admitted shall be applicable. Further, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.

7.9 A student detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required number of academic credits. The academic regulations under which the student has been readmitted shall be applicable to him.

8.0 Evaluation - Distribution and Weightage of Marks

8.1 The performance of a student in every subject/course (including practical examinations

and Project Stage – I & II) will be evaluated for 100 marks each, with 40 marks allotted for CIE (Continuous Internal Evaluation) and 60 marks for SEE (Semester End-Examination).

8.2 In CIE, Mid Term Examination for 30 marks (10 marks for Objective / Quiz Test with a duration of 20 Minutes and 20 marks for Descriptive test with a duration of 2.0 Hours), Assignment for 5 marks (Average of 2 Assignments each for 5 marks) and 5 marks for Subject Viva-Voce/PPT/Poster Presentation/ Case Study on a topic in the concerned subject before II Mid-Term Examinations.

For theory subjects, during a semester, there shall be two mid-term examinations. Each Mid-Term examination consists of Objective / Quiz test and Descriptive test.

i) The Objective / Quiz paper is set for a total of 10 marks with multiple choice, fill-in the blanks and match the following type of questions.

ii) Descriptive paper is set for 20 marks which contains 6 full questions out of which, the student has to answer 4 questions, each carrying 5 marks.

In each subject, A student shall have to earn 35% of marks in both CIE and semester end examinations i.e. 14 marks out of 40 marks in Continuous Internal Evaluation (average of two Mid-Term examinations), 21 marks out of 60 in Semester End-Examinations and overall 40% of marks i.e. 40 marks out of 100 marks put together.

While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five (5) marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-term examination, and the second assignment should be submitted before the conduct of the second mid-term examination. The average of the two assignments shall be taken as the final marks for assignment (for 5 marks).

The details of the end semester question paper pattern are as follows:

8.2.1 The semester end examinations (SEE), for Theory subjects, will be conducted for 60 marks consisting of two parts viz. i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.

Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from each unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. The duration of Semester End Examination is 3 hours.

8.3 For practical subjects there shall be a Continuous Internal Evaluation (CIE) during the semester for 40 marks and 60 marks for semester end examination. Out of the 40 marks for internal

evaluation:

1. A write-up on day-to-day experiment in the laboratory (in terms of aim, components/procedure, expected outcome) which shall be evaluated for 10 marks
2. 10 marks for viva-voce (or) tutorial (or) case study (or) application (or) poster presentation of the course concerned.
3. Internal practical examination conducted by the laboratory teacher concerned shall be evaluated for 10 marks.
4. The remaining 10 marks are for Laboratory Project, which consists of the Design (or) Software / Hardware Model Presentation (or) App Development (or) Prototype Presentation submission which shall be evaluated after completion of laboratory course and before semester end practical examination.

The Semester End Examination shall be conducted with an external examiner and the laboratory teacher.

In the Semester End Examination held for 3 hours, total 60 marks are divided and allocated as shown below:

1. 10 marks for write-up
2. 20 for experiment/program
3. 20 for evaluation of results
4. 10 marks for viva-voce on concerned laboratory course

8.4 The evaluation of courses having ONLY internal marks in I-Year I Semester and II- Year II Semester is as follows:

1. I Year I Semester course (*ex., Elements of CE/ME/ECE/CSE*): The internal evaluation is for 50 marks and it shall take place during I Mid-Term examination and II Mid-Term examination. The average marks of two Mid-Term examinations is the final for 50 marks. Student shall have to earn 40%, i.e 20 marks out of 50 marks from average of the two examinations. There shall be NO external evaluation. The student is deemed to have failed, if he (i) is absent as per schedule, or (ii) secures less than 40% marks in this course.

2. II Year II Semester *Real-Time (or) Field-based Research Project* course: The internal evaluation is for 50 marks and it shall take place during I Mid-Term examination and II Mid-Term examination. The average marks of two Mid-Term examinations is the final for 50 marks. Student shall have to earn 40%, i.e 20 marks out of 50 marks from average of the two examinations. There shall be NO external evaluation. The student is deemed to have failed, if he (i) does not submit a report on the Project, or (ii) does not make a presentation of the same before the internal committee as per schedule, or (ii) secures less than 40% marks in this course.

8.5 There shall be an Industry training (or) Internship (or) Industry oriented Mini-project (or) Skill Development Courses (or) Paper presentation in reputed journal (or) Industry Oriented Mini Project in collaboration with an industry of their specialization. Students shall register for this immediately after

II-Year II Semester Examinations and pursue it during summer vacation/semester break & during III Year without effecting regular course work. Internship at reputed organization (or) Skill development courses (or) Paper presentation in reputed journal (or) Industry Oriented Mini Project shall be submitted in a report form and presented before the committee in III-year II semester before end semester examination. It shall be evaluated for 100 external marks. The committee consists of an External Examiner, Head of the Department, Supervisor of the Industry Oriented Mini Project (or) Internship etc, Internal Supervisor and a Senior Faculty Member of the Department. There shall be **No internal marks** for Industry Training (or) Internship (or) Mini-Project (or) Skill Development Courses (or) Paper Presentation in reputed journal (or) Industry Oriented Mini Project.

8.6 The UG project shall be initiated at the end of the IV Year I Semester and the duration of the project work is one semester. The student must present Project Stage – I during IV Year I Semester before II Mid examinations, in consultation with his Supervisor, the title, objective and plan of action of his Project work to the departmental committee for approval before commencement of IV Year II Semester. Only after obtaining the approval of the departmental committee, the student can start his project work.

8.7 UG project work shall be carried out in two stages: Project Stage – I for approval of project before Mid-II examinations in IV Year I Semester and Project Stage – II during IV Year II Semester. Student has to submit project work report at the end of IV Year II Semester. The project shall be evaluated for 100 marks before commencement of SEE Theory examinations.

8.8 For Project Stage – I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall approve the project work to begin before II Mid-Term examination of IV Year I Semester. The student is deemed to be not eligible to register for the Project work, if he does not submit a report on Project Stage - I or does not make a presentation of the same before the evaluation committee as per schedule.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such 'one re appearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

8.9 For Project Stage – II, the external examiner shall evaluate the project work for 60 marks and the internal project committee shall evaluate it for 40 marks. Out of 40 internal marks, the departmental committee consisting of Head of the Department, Project Supervisor and a Senior Faculty Member shall evaluate the project work for 20 marks and Project Supervisor shall evaluate for 20 marks. The topics for Industry Oriented Mini Project/ Internship/SDC etc. and the main Project shall be different from the topic already taken. The student is deemed to have failed, if he (i) does not submit a report on the Project, or (ii) does not make a presentation of the same before the External Examiner as per schedule, or (iii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting viva-voce of project, the Principal selects an external examiner from the list

of experts in the relevant branch submitted by the Head of the department.

A student who has failed, may reappear once for the above evaluation, when it is scheduled again; if a student fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

8.10 A student shall be given one time chance to re-register for a maximum of two subjects:

- If the internal marks secured by a candidate in the continuous internal evaluation marks for 40 (Sum of average of two mid-term examinations consisting of Objective & descriptive parts, average of two assignments & subject viva-voce/PPT/Poster presentation/Case study on a topic in the concerned subject) are less than 35% and failed in those subjects.
- A student must Re-Register for the failed subject(s) for 40 marks within four weeks of commencement of the class work in next academic year.
- In the event of the student taking this chance, his Continuous Internal Evaluation marks for 40 and semester End Examination marks for 60 obtained in the previous attempt stand cancelled.

8.11 For mandatory audit courses of Environmental Science, Morals and Ethics, Constitution of India, Intellectual Property Rights and Gender Sensitization Lab, a student has to secure 40 marks out of 100 marks (i.e 40% of the 100 marks allotted) in the continuous internal evaluation for passing the subject/course. These marks should also be uploaded along with the internal marks of other subjects.

8.12. No marks of letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

8.13. SEE Evaluation System:

There will be two evaluations (1-Internal Valuator and 1-External Evaluator). Internal Evaluator will be nominated by the Principal, External Evaluator will be drawn from any of the following Institutions (i) JNTUH affiliated/Autonomous colleges (ii) Osmania University affiliated/Autonomous colleges (iii) Deemed Universities (iv) State/Central Universities.

Finalization of marks, if the difference of the marks is less than 15% i.e 9 marks, the average of marks of both evaluators will be considered as a final marks.

If the difference of the marks is more than 15% i.e 9 marks then it will be sent for third evaluation (External). In this case, the average of two nearer values will be considered as final marks. If the internal examiners are not available, two external examiners can be drawn for the evaluation.

9.0 Grading Procedure

9.1 Grades will be awarded to indicate the performance of students in each Theory Subject, Laboratory/Practicals/ Industry-Oriented Mini Project/Internship/SDC and Project Stage. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.

9.2 As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall

be followed:

% of Marks Secured in a Subject/Course(Class Intervals)	Letter Grade (UGC Guidelines)	Grade Points
Greater than or equal to 90%	O (Outstanding)	10
80% and above, and less than 90%	A+ (Excellent)	9
70% and above, and less than 80%	A (Very Good)	8
60% and above, and less than 70%	B+ (Good)	7
50% and above, and less than 60%	B (Average)	6
40% and above, and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

9.3 A student who has obtained an ‘F’ grade in any subject shall be deemed to have ‘**failed**’ and is required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.

9.4 To a student who has not appeared for an examination in any subject, ‘Ab’ grade will be allocated in that subject, and he is deemed to have ‘**Failed**’. A student will be required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.

9.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.

9.6 A student earns Grade Point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding ‘Credit Points’ (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

Credit Points (CP) = Grade Point (GP) x Credits For a course

9.7 A student passes the subject/ course only when $GP \geq 5$ (‘C’ grade or above)

9.8 The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points (CP) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as $SGPA = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \}$ for each semester

Where ‘I’ is the subject indicator index(considering all subjects in a semester), ‘N’ is the no.of subjects ‘registered’ for the semester , C_j is the no.of credits allotted tom the i^{th} subject, and G_i represents the grade point(GP) corresponding tom the letter grade awarded for that i^{th} subject.

9.9 The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the

total credit points secured by a student in **all** registered courses (of 160) in **all** semesters, and the total number of credits registered in **all** the semesters.

CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula computed as $CGPA = \frac{\sum_{j=1}^M C_j G_j}{\sum_{j=1}^M C_j}$ for All semester

(i.e., up to and inclusive of S semesters, $S \geq 2$),

where ‘M’ is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has ‘**registered**’ i.e., from the 1st semester onwards up to and inclusive of the 8th semester, ‘j’ is the subject indicator index (takes into account all subjects from 1 to 8 semesters), C_j is the no. of credits allotted to the jth subject, and G_j represents the grade points (GP) corresponding to the letter grade awarded for that jth subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

9.10 For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.

9.11 SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

10.0 Passing Standards

10.1 A student shall be declared successful or ‘passed’ in a semester, if he secures a $GP \geq 5.0$ (‘C’ grade or above) in every subject/course in that semester (i.e. when the student gets an $SGPA \geq 5.0$ at the end of that particular semester); and he shall be declared successful or ‘passed’ in the entire undergraduate programme, only when he/she gets a $CGPA \geq 5.00$ (‘C’ grade or above) for the award of the degree as required.

10.2 After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.) and credits earned. **There is NO exemption of credits in any case.**

11.0 Declaration of results

11.1 Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.

11.2 For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

12.0 Award of Degree

12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA>5.0), within 8 academic years from the date of commencement of the first academic year, shall be declared to have '**qualified**' for the award of B.Tech. degree in the branch of Engineering selected at the time of admission.

12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.

12.3 A student with final CGPA (at the end of the undergraduate programme) > 8.0, and fulfilling the following conditions - shall be placed in '**First Class with Distinction**'.

However, he

(i) Should have passed all the subjects/courses in '**First Appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.

(ii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student not fulfilling any of the above conditions with final CGPA > 8 shall be placed in '**First Class**'.

12.4 Students with final CGPA (at the end of the undergraduate programme) > 7.0 but < 8.00 shall be placed in '**First Class**'.

12.5 Students with final CGPA (at the end of the undergraduate programme) > 6.00 but < 7.00, shall be placed in '**Second Class**'.

12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the undergraduate programme) >5.00 but < 6, shall be placed in '**pass class**'.

12.7 A student with final CGPA (at the end of the undergraduate programme) < 5.00 will not be eligible for the award of the degree.

12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**Gold Medal**'.

12.9 Semester break regulation: A student may be permitted to take one year break after completion of B.Tech II Year – II Semester or B.Tech. – III Year – II Semester (with permission of the Principal of the college well in advance) and can re-enter the course in next Academic Year and complete the course on fulfilling all the academic credentials within a stipulated duration i.e. double the duration of the course (Ex. within 8 Years for 4-Year program).

13.0 Withholding of results

13.1 If the student has not paid the fees to the college at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

14.0 Transitory Regulations

A. For students detained due to shortage of attendance:

1. A Student who has been detained in I year of R22 Regulations due to lack of attendance, shall be permitted to join I year I Semester of next Regulations and he is required to complete the study of B.Tech programme within the stipulated period of eight academic years from the date of first admission in IYear.

2. A student who has been detained in any semester of II, III and IV years of R22 regulations for want of attendance, shall be permitted to join the corresponding semester of next Regulations and is required to complete the study of B.Tech. within the stipulated period of eight academic years from the date of first admission in I Year. The next Academic Regulations under which a student has been readmitted shall be applicable to that student from that semester. See rule (C) for further Transitory Regulations.

B. For students detained due to shortage of credits:

1. A student of R22 Regulations who has been detained due to lack of credits, shall be promoted to the next semester of next Regulations only after acquiring the required number of credits as per the corresponding regulations of his/her first admission. The total credits required are 160 including both R22 & next regulations. The student is required to complete the study of B.Tech. within the stipulated period of eight academic years from the year of first admission. The next Academic Regulations are applicable to a student from the year of readmission. See rule (C) for further Transitory Regulations.

C. For readmitted students in next Regulations:

1. A student who has failed in any subject under any regulation has to pass those subjects in the same regulations.

2. The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including next Regulations. **There is NO exemption of credits in any case.**

3. If a student is readmitted to next Regulations and has any subject with 80% of syllabus common with his/her previous regulations, that particular subject in next Regulations will be substituted by another subject to be suggested by the College.

Note: If a student readmitted to next Regulations and has not studied any subjects/topics in his/her earlier regulations of study which is prerequisite for further subjects in next Regulations, the College conducts remedial classes to cover those subjects/topics for the benefit of the students.

15.0 Student Transfers

15.1 There shall be no branch transfers after the completion of admission process.

15.2 The students seeking transfer from other colleges affiliated to JNTUH and various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of AVNIET, and also pass the subjects of AVNIET which the students have not studied at the

earlier institution. Further, though the students have passed some of the subjects at the earlier Institutions, if the same subjects are prescribed in different semesters of AVNIET, the students have to study those subjects in AVNIET in spite of the fact that those subjects are repeated.

15.3 The transferred students from other Universities/Institutions to AVNIET who are on rolls are to be provided one chance to write the CBT (for internal marks) in the **equivalent subject(s)** as per the clearance letter issued by the University.

16.0 Scope

16.1 The academic regulations should be read as a whole, for the purpose of any interpretation.

16.2 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Academic Council is final.

16.3 The College Academic Council may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the college authorities.

16.4 Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.

Academic Regulations For B.Tech (Lateral Entry Scheme) From The Ay 2023-24

1. Eligibility for the award of B.Tech Degree (LES)

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 120 credits and secure 120 credits with CGPA \geq 5.0 from II year to IV-year B.Tech. programme (LES) for the award of B.Tech. degree.

3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.

4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

5. Promotion rule

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 24 credits out of 40 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 48 credits out of 80 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth	Regular course of study of fourth year

	year second semester	first semester.
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6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).
7. LES students are not eligible for 2-Year B. Tech. Diploma Certificate.

Malpractices Rules

Disciplinary Action For / Improper Conduct in Examinations

	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The hall ticket of the student is to be cancelled and sent to the University.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The

		student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.

	result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	
7.	Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	Possesses any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.
9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject

		and all other subjects the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award a suitable punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.
2. Punishment for Institutions: (if the squad reports that the college is also involved in encouraging malpractices)
 - a. A show-cause notice shall be issued to the college.
 - b. Impose a suitable fine on the college.
 - c. Shifting the examination center from one college to another college for a specific period of not less than one year.

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