

B.Tech. in General Engineering

School of Mechanical and Materials Engineering (SMME)

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I. Program Description

The Bachelor of Technology (B.Tech.) in General Engineering is an innovative, interdisciplinary program offered by the School of Mechanical and Materials Engineering (SMME) at IIT Mandi. Unlike conventional engineering degrees that confine students to a single domain, this program cultivates *T-shaped* engineers — professionals with genuine depth in their chosen specialisation and the breadth to engage meaningfully with adjacent fields. History bears this out: neural networks were inspired by the biological brain, control theory shaped modern economics, and information theory revolutionised genetics. The most consequential

engineering advances have rarely come from within a single discipline — they have come from those who could think across boundaries.

The first two semesters are common to all students, establishing a strong foundation in mathematics, computing, electronics, design, and physics. At the start of the third semester, students choose one of four specialisations, each sitting at the intersection of multiple engineering disciplines:

- **AI & Robotics** — trains students to build machines that perceive, reason, and act autonomously, from robotic manipulators to AI-driven platforms.
- **Mechatronics & AI** — integrates mechanical systems with electrical intelligence, preparing students for smart actuators, embedded control, and cyber-physical systems.
- **Communications Technology** — covers the design and analysis of systems for transmitting and processing information, spanning wireless communications, signal processing, and optical networks.
- **Open Specialisation** — allows students to curate their own elective portfolio freely from across all departments, subject to a cross-departmental diversity requirement.

The degree awarded reflects the specialisation chosen:

- B.Tech. in General Engineering with AI & Robotics
- B.Tech. in General Engineering with Mechatronics & AI
- B.Tech. in General Engineering with Communications Technology
- B.Tech. in General Engineering (*awarded for Open Specialisation*)

Beyond the four active specialisations, the programme is expanding in several directions. **Fintech** — covering the application of mathematics, data science, and computational methods to financial systems — is currently under development with students already enrolled.¹ Its curriculum draws on quantitative finance, statistical learning, financial modelling, economics, and data science.

The programme also offers three other specialisations — **Advanced Manufacturing** (in collaboration with CMTI, Bangalore), **Energy Engineering** (in collaboration with Dalarna University, Sweden), and **Fashion Technology** (in collaboration with NIFT) — each with conceptual groundwork in place and the potential to be formalised for students who demonstrate sustained interest. These collaborations reflect the programme’s commitment to expanding the frontiers of engineering education — across industries, disciplines, and geographies — and to offering students pathways that few undergraduate engineering programmes in India currently provide.

II. Credit Structure of the Programme

The credit structure follows the standard norms of the institute, as shown below.

¹The course structure for this specialisation is under finalisation and will be published in a subsequent edition of this document.

Division	Sub-division	Credits
Institute Core (IC)	IC Compulsory (including FDP and DP)	39
	IC Baskets	6
	Indian Knowledge Systems (IKS) + Humanities and Social Sciences (HSS)	15
Discipline	Discipline Core (DC)	36
	Discipline Elective (DE)	30
Electives	Free Electives (FE)	22
	Interactive Socio Technical Practicum (ISTP)	4
	Major Technical Project (MTP)	8
TOTAL		160

Note: For the Open Specialisation, the Discipline Elective (DE) and Free Elective (FE) credits are merged into a single pool of 52 credits of Free Electives, giving students maximum flexibility in course selection.

III. Common First Year (Semesters 1 & 2)

The first two semesters are identical for all students, irrespective of the specialisation they subsequently choose.

L = Lecture hours T = Tutorial hours P = Practical hours C = Credits

B.Tech. in General Engineering – 1st Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 112	Calculus	2	0	0	2
2	IC 114	Linear Algebra	2	0	0	2
3	IC 181/ IC 182	Introduction to Consciousness and Holistic Wellbeing / History of Science and Technology	3	0	0	3
4	IC 152	Introduction to Python and Data Science	3	0	2	4
5	IC 230	Environmental Science (IC Basket – 1)	3	0	0	3
6	HSS	Language Basket (HSS)				3

Total Credits: 17

B.Tech. in General Engineering – 2 nd Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 102P	Foundations of Design Practicum	3	0	2	4
2	IC 113	Complex and Vector Calculus	2	0	0	2
3	IC 115	ODE & Integral Transforms	2	0	0	2
4	IC 161	Applied Electronics	3	0	0	3
5	IC 161P	Applied Electronics Lab	0	0	3	2
6	IC 240	Mechanics of Rigid Bodies (IC Basket – 2)	1.5	1.5	0	3
7	IC 252	Probability and Statistics	3	0	2	4
8	IC 140	Graphics for Design	2	0	3	4

Total Credits: 24

IV. Specialisation I: AI & Robotics

Overview

Where Mechatronics & AI focuses on building intelligent machines, AI & Robotics asks what those machines should do — how they perceive their environment, reason about it, and act within it autonomously. The curriculum covers robot kinematics and dynamics, autonomy through machine learning and control of robotic systems, and perception through robot vision and deep learning. Students work with manipulators, mobile robots, unmanned aerial systems, and marine robots, with a consistent emphasis on closing the loop between sensing, reasoning, and actuation in physical environments. Graduates are prepared for a wide range of roles — including robotics engineer, autonomy engineer, computer vision engineer, and AI systems engineer — across sectors such as industrial automation, autonomous vehicles, defence, logistics, space technology, and beyond. Students who complete this specialisation are awarded the degree *B.Tech. in General Engineering with AI & Robotics*.

Discipline Core Courses

AI & Robotics – Discipline Core (36 Credits)		
Course Code	Course Name	Credits
EE 201	Electromechanics	3
ME 206	Mechanics of Solids	3
DS 201	Data Handling and Visualisation	3
ME 309	Theory of Machines	4
AR 520	Design Practicum of Mechatronic Systems	3
ME 305	Design of Machine Elements	4
EE 261	Electrical Systems Around Us	3
IC 253	Programming and Data Structures	3
EE 301	Control Systems	3
AR 523	Robot Manipulators	3
AR 521	Control of Robotic Systems	3
ME 100	Reverse Engineering	1

Discipline Elective Courses

Students must select discipline electives from the lists below. Odd-semester electives are offered in Semesters 3, 5, and 7; even-semester electives are offered in Semesters 4, 6, and 8.

Odd Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
AR 511	Autonomous Mobile Robots	3	AR 522	Robot Vision	3
CS 212	Design of Algorithms	4	EE 260	Signals and Systems	3
IC 241	Material Science for Engineers	3	ME 212	Product Manufacturing Technology	3
ME 210	Fluid Mechanics	3	ME 213	Thermodynamics	4
EE 203	Network Theory	3	GE 303	Modern Powertrains: Electric, Hybrid & IC/Aeroengines	3

Even Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
EE 201P	Electromechanics Lab	1	DS 313	Statistical Foundation of Data Science	4
AR 508	Marine Robotics	3	AR 524	Robot Simulators	3
AR 525	Reinforcement Learning for Robotics	3	AR 526	Multimodal Learning	3
CE 251	Hydraulics Engineering	3	EE 211	Analog Circuit Design	3
EE 604	Digital Image Processing	4	AR 513	Unmanned Aerial System	3
IC 241	Material Science for Engineers	3	AR 509	Deep Learning for Computer Vision	4

Semester-wise Course Distribution

L = Lecture hours T = Tutorial hours P = Practical hours C = Credits

B.Tech. in General Engineering (AI & Robotics) – 3 rd Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 202P	Design Practicum	0	0	6	3
2	IC 272	Machine Learning	3	0	0	3
3	EE 261	Electrical Systems Around Us	3	0	0	3
4	ME 206	Mechanics of Solids	3	0	0	3
5	DS 201	Data Handling and Visualisation	2	0	2	3
6	DE	Discipline Elective	—	—	—	3
7	FE	Free Elective	—	—	—	3

Total Credits: 21

B.Tech. in General Engineering (AI & Robotics) – 4 th Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 222P	Physics Practicum	0	0	3	2
2	IC 253	Programming & Data Structures	2	0	2	3
3	EE 201	Electromechanics	2.5	0.5	0	3
4	ME 100	Reverse Engineering	0	0	2	1
5	HSS/IKS	HSS/IKS Course	—	—	—	3
6	DE	Discipline Elective	—	—	—	3
7	DE	Discipline Elective	—	—	—	3
8	FE	Free Elective	—	—	—	3

Total Credits: 21

B.Tech. in General Engineering (AI & Robotics) – 5 th Semester						
S.No	Code	Course Name	L	T	P	C
1	ME 309	Theory of Machines	3	1	0	4
2	ME 305	Design of Machine Elements	3	1	0	4
3	AR 523	Robot Manipulators	—	—	—	3
4	AR 521	Control of Robotic Systems	—	—	—	3
5	AR 520	Design Practicum of Mechatronic Systems	2	0	2	3
6	EE 301	Control Systems	2.5	0.5	0	3

Total Credits: 20

B.Tech. in General Engineering (AI & Robotics) – 6 th Semester						
S.No	Code	Course Name	L	T	P	C
1	DE	Discipline Elective	—	—	—	3
2	DE	Discipline Elective	—	—	—	4
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	3
5	HSS/IKS	HSS/IKS Course	—	—	—	3
6	DP 301/FE	Inter Socio Technical Practicum / Free Elective	—	—	—	4

Total Credits: 20

B.Tech. in General Engineering (AI & Robotics) – 7 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 498P/FE	Major Technical Project / Free Elective	—	—	—	3
2	IC 010	Internship	—	—	—	2
3	FE	Free Elective	—	—	—	4
4	FE	Free Elective	—	—	—	3
5	DE	Discipline Elective	—	—	—	3
6	DE	Discipline Elective	—	—	—	4

Total Credits: 19

B.Tech. in General Engineering (AI & Robotics) – 8 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 499P/FE	Major Technical Project / Free Elective	—	—	—	5
2	DE	Discipline Elective	—	—	—	3
3	FE	Free Elective	—	—	—	3
4	DE	Discipline Elective	—	—	—	4
5	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 18

Grand Total: 160 Credits

V. Specialisation II: Mechatronics & AI

Overview

Where AI & Robotics focuses on autonomy and perception, Mechatronics & AI focuses on the machine itself — how mechanical, electrical, and computational subsystems are designed, integrated, and controlled to function reliably as a whole. Students develop foundations in circuit design, signals and systems, and electromechanics before moving into control systems, measurement and instrumentation, and the mechatronic systems design practicum — where real electromechanical assemblies are built and tested. Upper semesters introduce embedded systems, digital signal processing, and AI methods applied directly to hardware control loops. Graduates are prepared for a wide range of roles — including embedded systems engineer, controls engineer, automation engineer, and R&D engineer — across industries such as manufacturing, automotive, aerospace, medical devices, and beyond. Students who complete this specialisation are awarded the degree *B.Tech. in General Engineering with Mechatronics & AI*.

Discipline Core Courses

Mechatronics & AI – Discipline Core (36 Credits)		
Course Code	Course Name	Credits
EE 261	Electrical Systems Around Us	3
EE 260	Signals & Systems	3
EE 201	Electromechanics	3
EE 211	Analog Circuit Design	3
ME 305	Design of Machine Elements	4
AR 520	Design Practicum of Mechatronic Systems	3
ME 206	Mechanics of Solids	3
ME 309	Theory of Machines	4
EE 301	Control Systems	3
EE 203	Network Theory	3
EE 231	Measurement and Instrumentation	3
ME 100	Reverse Engineering	1

Discipline Elective Courses

Odd Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
AR 521	Control of Robotic Systems	3	CS 313	Computer Networks	4
EE 210	Digital System Design	3	EE 210P	Digital System Design Lab	1
EE 311	Device Electronics for Integrated Circuits	3	EE 314	Digital Signal Processing	3
EE 326	CO and Processor Architecture Design	4	IC 241	Material Science for Engineers	3
ME 210	Fluid Mechanics	3	ME 212	Product Manufacturing Technology	3
ME 213	Thermodynamics	3	ME 315	Manufacturing Engineering – II	3
CS 212	Design of Algorithms	4	CS 305	Artificial Intelligence	3
GE 303	Modern Powertrains: Electric, Hybrid & IC/Aeroengines	3			

Even Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
AR 523	Robot Manipulators	3	EE 201P	Electromechanics Lab	1
EE 529	Embedded Systems	4	IC 121	Mechanics of Particles and Waves	3
ME 215	Manufacturing Engineering – I	3	ME 513	Finite Element Method in Engineering	3
ME 527	Thermal Management of Electronics	3	AR 526	Multimodal Learning	3
AR 509	Deep Learning for Computer Vision	4			

Semester-wise Course Distribution

L = Lecture hours T = Tutorial hours P = Practical hours C = Credits

B.Tech. in General Engineering (Mechatronics & AI) – 3 rd Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 202P	Design Practicum	0	0	6	3
2	IC 272	Machine Learning	3	0	0	3
3	EE 261	Electrical Systems Around Us	3	0	0	3
4	ME 206	Mechanics of Solids	3	0	0	3
5	EE 203	Network Theory	3	0	0	3
6	EE 260	Signals and Systems	3	0	0	3
7	DE	Discipline Elective	—	—	—	3

Total Credits: 21

B.Tech. in General Engineering (Mechatronics & AI) – 4 th Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 222P	Physics Practicum	0	0	3	2
2	EE 201	Electromechanics	2.5	0.5	0	3
3	EE 211	Analog Circuit Design	2	0	2	3
4	ME 100	Reverse Engineering	0	0	2	1
5	HSS/IKS	HSS/IKS Course	—	—	—	3
6	DE	Discipline Elective	—	—	—	3
7	DE	Discipline Elective	—	—	—	4

Total Credits: 19

B.Tech. in General Engineering (Mechatronics & AI) – 5 th Semester						
S.No	Code	Course Name	L	T	P	C
1	AR 520	Design Practicum of Mechatronic Systems	2	0	2	3
2	ME 305	Design of Machine Elements	3	1	0	4
3	ME 309	Theory of Machines	3	1	0	4
4	EE 301	Control Systems	2.5	0.5	0	3
5	EE 231	Measurement and Instrumentation	2	0	2	3
6	DE	Discipline Elective	—	—	—	3

Total Credits: 20

B.Tech. in General Engineering (Mechatronics & AI) – 6 th Semester						
S.No	Code	Course Name	L	T	P	C
1	DE	Discipline Elective	—	—	—	3
2	DE	Discipline Elective	—	—	—	3
3	DE	Discipline Elective	—	—	—	4
4	FE	Free Elective	—	—	—	3
5	DP 301/FE	Inter Socio Technical Practicum / Free Elective	—	—	—	4
6	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 20

B.Tech. in General Engineering (Mechatronics & AI) – 7 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 498P/FE	Major Technical Project / Free Elective	—	—	—	3
2	IC 010	Internship	—	—	—	2
3	DE	Discipline Elective	—	—	—	4
4	FE	Free Elective	—	—	—	3
5	FE	Free Elective	—	—	—	3
6	FE	Free Elective	—	—	—	3

Total Credits: 18

B.Tech. in General Engineering (Mechatronics & AI) – 8 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 499P/FE	Major Technical Project / Free Elective	—	—	—	5
2	DE	Discipline Elective	—	—	—	3
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	3
5	FE	Free Elective	—	—	—	4
6	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 21

Grand Total: 160 Credits

VI. Specialisation III: Communications Technology

Overview

Communications Technology is grounded in the mathematics of information — how it is represented, transmitted, processed, and secured. The curriculum covers communication theory, digital signal processing, electromagnetics, and computer networks as its core, with upper-semester electives spanning wireless systems, optical networks, IoT, information theory, and biomedical signal processing. The specialisation has a strong analytical foundation and is well suited to students who wish to pursue graduate study in electrical engineering or research in communication systems. Graduates are prepared for a wide range of roles — including RF and wireless engineer, signal processing engineer, network engineer, and communications researcher — across industries such as telecom, satellite systems, defence electronics, semiconductor design, and beyond. Students who complete this specialisation are awarded the degree *B.Tech. in General Engineering with Communications Technology*.

Discipline Core Courses

Communications Technology – Discipline Core (36 Credits)		
Course Code	Course Name	Credits
ME 100	Reverse Engineering	1
EE 261	Electrical Systems Around Us	3
EE 231	Measurement & Instrumentation	3
EE 304	Communication Theory	3
EE 201	Electromechanics	3
DS 404	Information, Security, Privacy	3
EE 203	Network Theory	3
IC 253	Programming and Data Structures	3
EE 260	Signals & Systems	3
CS 313	Computer Networks	4
EE 314	Digital Signal Processing	4
EE 202	Electromagnetics & Wave Propagation	3

Discipline Elective Courses

Odd Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
EE 517	Wireless Communications & Networks	3	EE 553	Fundamentals of Intelligent Communication System-I	4
EE 503	Advanced Communication Theory	3	DS 201	Data Handling and Visualisation	3
IC 241	Material Science for Engineers	3	GE 303	Modern Powertrains: Electric, Hybrid & IC/Aeroengines	3
VL 402	RFIC Design	3			

Even Semester Electives:

Code	Course Name	Cr.	Code	Course Name	Cr.
EE 608	Digital Image Processing	4	EE 641	Advanced Wireless Technologies	3
EE 536	IoT Systems	3	DS 313	Statistical Foundation of Data Science	4
CS 549	Performance Analysis of Computer Networks	3	EE 518	Information Theory	3
EE 541	Tensors: Applications for Signal Processing & ML	3	EE 211	Analog Circuit Design	3
EE 533	Access Network	4	EE 530	Applied Optimization	3
EE 607	Optical Communication System	3	IC 241	Material Science for Engineers	3
EE 581	Fundamentals of Intelligent Communication System-II	3	EE 201P	Electromechanics Lab	1
EE 574	Biomedical Signal & Image Processing	3			

Semester-wise Course Distribution

L = Lecture hours T = Tutorial hours P = Practical hours C = Credits

B.Tech. in General Engineering (Communications Technology) – 3 rd Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 202P	Design Practicum	0	0	6	3
2	IC 272	Machine Learning	3	0	0	3
3	EE 261	Electrical Systems Around Us	3	0	0	3
4	EE 203	Network Theory	3	0	0	3
5	EE 260	Signals and Systems	3	0	0	3
6	CS 313	Computer Networks	3	0	2	4
7	DE	Discipline Elective	—	—	—	3

Total Credits: 22

B.Tech. in General Engineering (Communications Technology) – 4 th Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 222P	Physics Practicum	0	0	3	2
2	EE 201	Electromechanics	2.5	0.5	0	3
3	EE 316	Communication Systems	3	0	2	4
4	ME 100	Reverse Engineering	0	0	2	1
5	IC 253	Programming and Data Structures	2	0	2	3
6	DS 404	Information, Security, Privacy	3	0	0	3
7	EE 202	Electromagnetics & Wave Propagation	3	0	0	3

Total Credits: 19

B.Tech. in General Engineering (Communications Technology) – 5 th Semester						
S.No	Code	Course Name	L	T	P	C
1	EE 231	Measurement & Instrumentation	2	0	2	3
2	EE 314	Digital Signal Processing	3	0	2	4
3	DE	Discipline Elective	—	—	—	3
4	DE	Discipline Elective	—	—	—	3
5	DE	Discipline Elective	—	—	—	3
6	DE	Discipline Elective	—	—	—	3

Total Credits: 19

B.Tech. in General Engineering (Communications Technology) – 6 th Semester						
S.No	Code	Course Name	L	T	P	C
1	DE	Discipline Elective	—	—	—	3
2	DE	Discipline Elective	—	—	—	3
3	DE	Discipline Elective	—	—	—	4
4	FE	Free Elective	—	—	—	3
5	DP 301/FE	Inter Socio Technical Practicum / Free Elective	—	—	—	4
6	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 20

B.Tech. in General Engineering (Communications Technology) – 7 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 498P/FE	Major Technical Project / Free Elective	—	—	—	3
2	IC 010	Internship	—	—	—	2
3	DE	Discipline Elective	—	—	—	4
4	FE	Free Elective	—	—	—	3
5	FE	Free Elective	—	—	—	3
6	FE	Free Elective	—	—	—	3

Total Credits: 18

B.Tech. in General Engineering (Communications Technology) – 8 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 499P/FE	Major Technical Project / Free Elective	—	—	—	5
2	DE	Discipline Elective	—	—	—	3
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	3
5	FE	Free Elective	—	—	—	4
6	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 21

Grand Total: 160 Credits

VII. Specialisation IV: Open Specialisation

Overview

The Open Specialisation provides a broad discipline core — spanning thermodynamics, manufacturing, analog circuits, programming, material science, macroeconomics, and data handling — and then allows students to build their upper-semester curriculum freely from across all departments of the institute. It suits students with a clear cross-domain interest that no named specialisation captures, as well as those who wish to explore before committing to a direction. Students who use the elective pool coherently are well positioned for roles at the boundaries of fields and for competitive postgraduate programmes across a wide range of disciplines. Students who complete this specialisation are awarded the degree *B.Tech. in General Engineering*.

Discipline Core Courses

Open Specialisation – Discipline Core (36 Credits)		
Course Code	Course Name	Credits
ME 100	Reverse Engineering	1
EE 261	Electrical Systems Around Us	3
EE 231	Measurement and Instrumentation	3
ME 213	Thermodynamics	3
EE 201	Electromechanics	3
EE 211	Analog Circuit Design	3
ME 212	Product Manufacturing Technology	3
IC 241	Material Science for Engineers	3
IC 253	Programming and Data Structures	3
DS 201	Data Handling and Visualisation	3
HS 307	Macroeconomics	3
HS 541	Technical Communication	1
ME 305	Design of Machine Elements	4

Elective Policy

There is no prescribed elective list for this specialisation. Students may choose electives from any department, provided that no more than 40% of their elective credits come from the discipline core course list of any single named specialisation. The 52 free elective credits replace the separate DE and FE pools used in other specialisations.

Semester-wise Course Distribution

L = Lecture hours T = Tutorial hours P = Practical hours C = Credits

B.Tech. in General Engineering (Open Specialisation) – 3 rd Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 202P	Design Practicum	0	0	6	3
2	IC 272	Machine Learning	3	0	0	3
3	EE 261	Electrical Systems Around Us	3	0	0	3
4	ME 213	Thermodynamics	2	1	0	3
5	ME 212	Product Manufacturing Technology	3	0	0	3
6	IC 241	Material Science for Engineers	3	0	0	3
7	FE	Free Elective	—	—	—	3

Total Credits: 21

B.Tech. in General Engineering (Open Specialisation) – 4 th Semester						
S.No	Code	Course Name	L	T	P	C
1	IC 222P	Physics Practicum	0	0	3	2
2	IC 253	Programming & Data Structures	2	0	2	3
3	EE 211	Analog Circuit Design	2	0	2	3
4	ME 100	Reverse Engineering	0	0	2	1
5	EE 201	Electromechanics	3	0	0	3
6	HS 307	Macroeconomics	3	0	0	3
7	FE	Free Elective	—	—	—	3
8	FE	Free Elective	—	—	—	3

Total Credits: 21

B.Tech. in General Engineering (Open Specialisation) – 5 th Semester						
S.No	Code	Course Name	L	T	P	C
1	ME 305	Design of Machine Elements	3	1	0	4
2	DS 201	Data Handling and Visualisation	3	0	0	3
3	EE 231	Measurement and Instrumentation	2	0	2	3
4	HSS/IKS	HSS/IKS Course	—	—	—	3
5	FE	Free Elective	—	—	—	3
6	FE	Free Elective	—	—	—	3
7	FE	Free Elective	—	—	—	3

Total Credits: 22

B.Tech. in General Engineering (Open Specialisation) – 6 th Semester						
S.No	Code	Course Name	L	T	P	C
1	HS 541	Technical Communication	1	0	0	1
2	FE	Free Elective	—	—	—	4
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	3
5	DP 301/FE	Inter Socio Technical Practicum / Free Elective	—	—	—	4
6	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 18

B.Tech. in General Engineering (Open Specialisation) – 7 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 498P/FE	Major Technical Project / Free Elective	—	—	—	3
2	IC 010	Internship	—	—	—	2
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	3
5	FE	Free Elective	—	—	—	4
6	FE	Free Elective	—	—	—	4

Total Credits: 19

B.Tech. in General Engineering (Open Specialisation) – 8 th Semester						
S.No	Code	Course Name	L	T	P	C
1	GE 499P/FE	Major Technical Project / Free Elective	—	—	—	5
2	FE	Free Elective	—	—	—	3
3	FE	Free Elective	—	—	—	3
4	FE	Free Elective	—	—	—	4
5	HSS/IKS	HSS/IKS Course	—	—	—	3

Total Credits: 18

Grand Total: 160 Credits