

SREENIDHI INSTITUTE OF SCIENCE & TECHNOLOGY (AUTONOMOUS)

B.Tech in Mechanical Engineering

COURSE STRUCTURE 2017-18

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6H101	English-I	2	---	---	2	25	75
2	6H111	Engineering Mathematics-I	3	1	---	3	25	75
3	6H121	Engineering Physics-I	3	1	---	3	25	75
4	6H131	Engineering Chemistry	2	1	---	2	25	75
5	6F101	Computer Programming	3	1	---	3	25	75
6	6B101	Engineering Drawing-I	1	1	4	3	25	75
7	6H171	English Language and Communication Skills Lab	---	---	2	1	25	75
8	6H181	Engineering Physics Lab – I	---	---	2	1	25	75
9	6H186	Engineering Chemistry Lab	---	---	2	1	25	75
10	6F171	C- Programming Lab	---	---	4	2	25	75
11	6B171	Engineering Workshop – I	---	---	2	1	25	75
12	6F172	IT Workshop – I	---	---	2	1	25	75
13	6B191	Seminar on Current Affairs Technical Topic			2	1	100	--
Total			14	5	20	24	400	900

I Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	6H202	English-II	2	2	----	2	25	75
2	6H213	Engineering Mathematics-II	3	1	---	3	25	75
3	6E201	Data Structures	3	1	---	3	25	75
4	6B202	Engineering Drawing-II	1	1	2	2	25	75
5	6H232	Environmental and applied chemistry	2	1	---	2	25	75
6	6B203	Engineering Mechanics	3	1	---	3	25	75
7	6H224	Applied Physics -II	3	1	---	3	25	75
8	6ZC03	Gender sensitization, Values and Ethics and Yoga	1	1	---	1	25	75
9	6E271	Data Structures Lab (C, C++)	---	---	4	2	25	75
10	6B272	Engineering Workshop-II	---	---	2	1	25	75
11	6H282	Applied Physics Lab	---	---	2	1	25	75
12	6B292	Seminar on Science and its impact/ Technical topic	---	---	2	1	100	---
Total			18	9	12	24	375	825

Note: All End Examinations (Theory and Practical) are of **Three** hours duration.

T – Tutorial
C- Credits

L- Theory
Int. - Internal Exam

P/D – Practical/Drawing
Ext. - External Exam

II Year – I Semester								
S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6H373	Functional and Communicative English	1	2	--	1	25	75
2	6H316	Engineering Mathematics –III	3	1	---	3	25	75
3	6ZC01	Managerial Economics and Financial Analysis	2	2	---	2	25	75
4	6B305	Thermodynamics	3	1	---	3	25	75
5	6B306	Mechanics of Solids	3	1	---	3	25	75
6	6B307	Metallurgy and Material Science	3	1	---	3	25	75
7	6BC08	Fluid Mechanics and Hydraulic Machinery	3	1	---	3	25	75
8	6B373	Fluid Mechanics and Hydraulic Machinery Lab	---	---	3	2	25	75
9	6B374	Fuels and Lubricants Lab			2	1	25	75
10	6B375	Metallurgy Lab	---	---	2	1	25	75
11	6B376	Mechanics of Solids Lab	---	---	2	1	25	75
12	6B393	Seminar on Technology and its impact /Technical topic			2	1	100	--
Total			18	9	11	24	375	825

II Year – II Semester								
S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6HC18	Probability and Statistics	3	1	---	3	25	75
2	6B409	Applied Thermodynamics-I	3	1	---	3	25	75
3	6B410	Manufacturing processes	3	1	---	3	25	75
4	6AC48	Elements of Electrical and Electronics Engineering	2	2	---	2	25	75
5		Open Elective-I	2	1	--	2	25	75
6	6B412	<i>Machine Drawing and Computer aided drawing</i>	1	2	4	3	25	75
7	6EC70	Java Programming	2	2	-	2	25	75
8	6B477	Manufacturing Processes Lab	---	---	3	2	25	75
9	6AC95	Electrical and Electronics Engineering Lab	---	---	2	1	25	75
10	6EC74	Java Programming Lab			2	1	25	75
11	6B478	Comprehensive Viva-voce-I	---	---	---	1	50	50
12	6B494	Technical seminar			2	1	100	--
Total			16	10	13	24	400	800

Open Elective-I		Streams
6FC32	Data Base Systems	CSC
6GC46	Applied Biology	BT
6ZC22	Basics of Entrepreneurship	Entrepreneurship Stream-MBA
6ZC25	Basic of Indian Economy	Social Sciences Stream
6ZC20	Product and Services	Technology Entrepreneurship

6ZC05	Banking Operations, insurance and Risk Management	Finance Stream
6BC61	Smart Materials	MECH
6CC54	Fundamental of Digital Circuits and Microprocessors	ECE
6HC51	Basic Spanish Language	language

Note: All End Examinations (Theory and Practical) are of **Three** hours duration.

T – Tutorial

L- Theory

P/D – Practical/Drawing

C- Credits

CIE- Continuous Internal Evaluation

SEE – Semester End Evaluation

III Year – I Semester (5th Semester)

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6B513	Operations Research	3	1	---	3	25	75
2	6B514	Kinematics of Machinery	3	1	---	3	25	75
3	6B515	Metal Cutting and Machine Tools	3	1	---	3	25	75
4	6B516	Applied Thermodynamics-II	3	1	---	3	25	75
5	6B517	Design of Machine Members-I	3	1	---	3	25	75
6		Open Elective-II	2	1	---	2	25	75
7	6H576	Quantitative Aptitude	--	--	2	1	25	75
8	6B565	Group Project	---	---	2	1	25	75
9	6B579	Applied Thermodynamics Lab	---	---	3	2	25	75
10	6B580	Machine Tools Lab	---	---	3	2	25	75
11	6B595	Technical Literature review and seminar-I	---	---	2	1	100	---
	6B569	Summer Industry Internship-I (Evaluation will be in III - I)	---	---	---	0	25	75
Total			17	6	12	24	350	750

III Year – II Semester (6th Semester)

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6B619	Design of Machine Members-II	2	2	---	2	25	75
2	6B620	Heat Transfer	3	1	---	3	25	75
3	6B621	CAD/CAM	2	2	---	2	25	75
4	6B622	Dynamics of Machinery	3	1	---	3	25	75
5		Professional Elective-I	3	---	---	3	25	75
6		Open Elective-III	2	1	---	2	25	75
7	6H677	Logical Reasoning	--	--	2	1	25	75
8	6B681	Comprehensive Viva-voce-II	---	---	---	1	25	75
9	6B682	Heat Transfer Lab	---	---	3	2	25	75
10	6B683	CAD/CAM Lab	---	---	3	2	25	75
11	6B684	KOM & DOM Lab	---	---	2	1	25	75
12	6HC74	Effective English Communication & Soft Skills	--	---	2	1	100	--
13	6B696	Technical Literature review and seminar-II	--	---	2	1	100	--
	****	Industry Oriented Mini Project	---	---	---			
Total			15	7	14	24	475	825

IV Year I Semester(7th Semester)

Sl. No	Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1	6B729	Metrology and Instrumentation	3	1	---	3	25	75
2	6B730	Finite Element Method	3	1	---	3	25	75
3		Professional Elective-II	3	--	---	3	25	75
4		Professional Elective-III	3	--	---	3	25	75
5	6GC49	Intellectual Property Rights	1	1	-	1	25	75
6	6ZC03	Management Science	3	---	---	3	25	75
7	6B766	Project -I	---	---	6	3	100	-
8	6B767	Industry Oriented Mini Project	---	---	---	2	25	75
9	6B785	Metrology Lab	---	---	2	2	25	75
10	6B786	Instrumentation Lab	---	---	2	2	25	75
11	6B787	Production Drawing Practice	---	1	4	2	25	75
12	6B797	Technical Paper Writing and Seminar-III	---	---	2	1	100	---
		Total	16	4	16	28	450	750

IV Year II Semester(8th Semester)

Sl. No	Code	Subject	L	T	P/D	C	Max. Marks	
							CIE	SEE
1		Professional Elective - IV	3	2	---	3	25	75
2		Professional Elective - V	3	2	---	3	25	75
3	6B868	Project - II	---	---	24	12	25	75
4	6B888	Comprehensive Viva-voce-III	---	---	---	1	25	75
5	6B898	Technical Paper Writing and Seminar-IV	---	---	2	1	100	---
		Total :	6	4	26	20	200	300

CODE	Professional Elective-I
6B623	Design and Analysis of Experiments
6B624	Hydraulics and Pneumatic Systems
6B625	Thermal Turbo machinery
6B626	Automobile Engineering
6B627	Additive Manufacturing Technologies
6B628	Introduction to Nanotechnology
	MOOC online course

CODE	Professional Elective-II
6B731	Rotor Dynamics
6B732	Refrigeration and Air Conditioning
6B733	Advanced Manufacturing Processes
6B734	Characterization of Nanomaterials

CODE	Professional Elective-III
6B736	Design of Mechanisms
6B737	Renewable Energy Systems
6B738	Design of Press tools and Tool Design
6B739	Nano Bio-Materials
6B740	Mechatronics

CODE	Professional Elective-IV
6B841	Fracture Mechanics
6B842	Power Plant Engineering
6BC43	Automation and Robotics
6B844	Nanocomposites
6B845	Simulation Modeling of Manufacturing Systems

CODE	Professional Elective-V
6B846	Design Optimization
6B847	Jet propulsion and Rocket Engineering
6B848	Computational Fluid Dynamics
6B849	Mechanics Manufacturing Methods of Composite Materials
6B850	Carbon based nanostructures and their applications
6B851	Flexible Manufacturing System & Machine Vision

CODE	Open Elective-I
6FC32	Data Base Systems
6GC46	Applied Biology (B.T.Stream)
6FC04	Banking operations, Insurance and Risk Management (Minor MBA Stream)
6B411	Smart Materials
6CC54	Fundamental of Digital Circuits and Microprocessors(Minor ECE Stream)
6HC51	Basic Spanish Language

CODE	Open Elective-II
6ZC24	Innovation and Design Thinking
6ZC26	Basics of Polity and Ecology
6ZC19	Entrepreneurship Project Management and Structured Finance
6EC67	Operating Systems concepts
6GC47	Fundamentals of Bio Informatics
6CC55	Communication Engineering
6AC46	Control System Engineering
6CC25	Sensor and Actuators
6HC41	Basic French Language

CODE	Open Elective-III
6GC50	Computational Biology (B.T.Stream)
6FC33	Data Analytics
6CC56	VLSI & Embedded System
6FC08	Enterprise Resource Planning(ERP) (TEP Steam)
6ZC23	Advance Entrepreneurship
6ZC27	Indian history, Culture and Geography
6ZC21	General Management of Entrepreneurship
6ZC15	Finanacial Institutions, Markets and Services
6AC44	Fundamentals of Measurements and Instrumentation
6HC46	Basic German Language
6FC35	Phython Programme Concepts

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T – Tutorial L- Theory P/D – Practical/Drawing

C- Credits Int. – Internal Exam Ext. – External Exam

BSC-Basic Science Courses

ESC-Engineering Science Courses

HSMC-Humanities and Social Sciences including Management Courses

PCC-Professional core courses

PEC-Professional elective courses

OEC-Open elective courses

LC-Laboratory courseMC-Mandatory course