

SREENIDHI INSTITUTE OF SCIENCE & TECHNOLOGY (AUTONOMOUS)

B.Tech in Mechanical Engineering

COURSE STRUCTURE 2014-15

I Year – I Semester

S. No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4H101	English-I	2	1	---	2	30	70
2	4H111	Engineering Mathematics-I	3	2	---	3	30	70
3	4H121	Engineering Physics-I	3	1	---	3	30	70
4	4H131	Engineering Chemistry-I	3	1	---	3	30	70
5	4F101	Computer Programming	4	1	---	4	30	70
6	4B101	Engineering Drawing-I	2	---	4	4	30	70
7	4H171	English Language Lab-I	---	---	2	1	25	50
8	4H181	Engineering Physics Lab – I	---	---	3/2	1	25	50
9	4H186	Engineering Chemistry Lab	---	---	4/2	2	25	50
10	4F171	Computer Programming Lab	---	---	3	2	25	50
11	4B171	Engineering Workshop - I	---	---	3/2	1	25	50
12	4F172	IT Workshop - I	---	---	3/2	1	25	50
13	4B172	Technical Paper Writing & Seminar-I	---	---	2	1	25	---
Total			17	6	17.5	28	355	720

I Year – II Semester

S. No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4H202	English-II	2	1	----	2	30	70
2	4H213	Engineering Mathematics-II	4	1	---	4	30	70
3	4E201	Data Structures and C++	4	1	---	4	30	70
4	4B202	Engineering Drawing-II	2	---	3	3	30	70
5	4H232	Engineering Chemistry-II	3	1	---	3	30	70
6	4B203	Engineering Mechanics	3	2	---	3	30	70
7	4H223	Applied Physics	3	1	---	3	30	70
8	4H272	English Language Lab-II	---	---	2	1	25	50
9	4E271	Data Structures and C++ Lab	---	---	3	2	25	50
10	4B273	Engineering Workshop-II	---	---	3/2	1	25	50
11	4H282	Engineering Physics Lab-II	---	---	3/2	1	25	50
12	4B274	Technical Paper Writing & Seminar-II	---	---	2	1	25	---
Total			21	7	13	28	335	690

II Year – I Semester

S. No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4H315	Engineering Mathematics -III	3	2	---	3	30	70
2	4C331	Electronics for Mechanical Engineering	3	1	---	3	30	70
3	4B304	Thermodynamics	4	1	---	4	30	70
4	4B305	Mechanics of Solids	4	1	---	4	30	70
5	4B306	Metallurgy & Material Science	4	---	---	4	30	70
6	4AC41	Basic Electrical Engineering	3	1	---	3	30	70
7	4HC73	Functional and Communicative Written English	---	---	3	2	25	50
8	4AC91	Basic Electrical Engineering Lab	---	---	4/2	1	25	50
9	4CC80	Basic Electronics Lab	---	---	4/2	1	25	50
10	4B375	Metallurgy Lab	---	---	4/2	1	25	50
11	4B376	Mechanics of Solids Lab	---	---	4/2	1	25	50
12	4B377	Technical Paper Writing & Seminar-III	---	---	2	1	25	---
Total			21	6	13	28	330	670

II Year – II Semester

S. No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4GC06	Environmental Studies	3	1	---	3	30	70
2	4HC16	Probability and Statistics	3	1	---	3	30	70
3	4B407	Applied Thermodynamics-I	3	1	---	3	30	70
4	4B408	Manufacturing Processes	3	1	---	3	30	70
5	4B409	Fluid Mechanics & Hydraulic Machinery	4	1	---	4	30	70
6	4B410	Machine Drawing	1	---	6	4	30	70
7	4HC74	Effective English Communication and Soft Skills	---	---	3	2	25	50
8	4B478	Comprehensive Viva-voce-I	---	---	---	1	---	50
9	4B479	Manufacturing Processes Lab	---	---	4	2	25	50
10	4B480	Fluid Mechanics & Hydraulic Machinery Lab	---	---	4	2	25	50
11	4B481	Technical Paper Writing & Seminar-IV	---	---	2	1	25	---
Total			17	5	19	28	280	620

III Year – I Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1		Open Elective-I	3	--	---	3	30	70
2	4B511	Kinematics of Machinery	3	1	---	3	30	70
3	4B512	Metal Cutting & Machine Tools	3	1	---	3	30	70
4	4B513	Applied Thermodynamics-II	4	1	---	4	30	70
5	4B514	Design of Machine Members-I	4	1	---	4	30	70
6	4ZC01	Managerial Economics and Financial Analysis	3	1	---	3	30	70
7	4HC76	Quantitative Aptitude	---	---	3	2	25	50
8	4B582	Group Project	---	---	3	1	25	50
9	4B583	Applied Thermodynamics Lab	---	---	4	2	25	50
10	4B584	Machine Tools Lab	---	---	4	2	25	50
11	4B585	Technical Paper Writing & Seminar-V	---	---	2	1	25	---
Total			20	5	14	28	305	620

Open Elective – I

4HC51	Basic Spanish Language
4HC41	Basic French Language
4HC46	Basic German Language
4FC 06	Computer Graphics
4FC03	Data Base Systems
4EC03	Java Programming
4B515	Product & Services Design
4ZC04	Entrepreneurship

III Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4B616	Metrology & Instrumentation	3	1	---	3	30	70
2		Open elective - II	3	1	---	3	30	70
3	4B617	Design of Machine Members-II	4	1	---	4	30	70
4	4B618	Heat Transfer	4	1	---	4	30	70
5	4B619	CAD/CAM	3	1	---	3	30	70
6	4B620	Dynamics of Machinery	3	1	---	3	30	70
7	4HC77	Logical Reasoning	---	---	3	2	25	50
8	4B686	Comprehensive Viva-voce-II	---	---	---	1	--	50
9	4B687	Heat Transfer Lab	---	---	4	2	25	50
10	4B688	Metrology & Instrumentation Lab	---	---	4	2	25	50
11	4B689	Technical paper writing & seminar-VI	---	---	2	1	25	---
Total			20	6	13	28	280	620

Open Elective – II

4ZC11	Logistics and Supply chain management
4ZC07	Fundamentals of Disaster Management
4ZC03	Banking operations, Insurance and Risk Management
4ZC09	Total Quality Management
4ZC05	General management & entrepreneurship

*** Industry Oriented Min Project will be conducted by all students in summer vacation of III/IV B.Tech, II semester for a period of One month. The report must be submitted in IV/IV B.Tech I-Semester and will have to be defended. Marks allotted are “75” and Two Credits are provided.

IV Year – I Semester

S. No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4B721	Principle of Finite Element Method	4	---	---	4	30	70
2	4B722	Refrigeration & Air Conditioning	4	---	---	4	30	70
3	4B723	Power Plant Engineering	4	---	---	4	30	70
4	4B724	Operations Research	4	1	---	4	30	70
5		Professional Elective-I	4	---	---	4	30	70
6		Professional Elective-II	4	---	---	4	30	70
7	4GC33	Intellectual property rights, Values, and Ethics	2	1	---	2	30	70
8	4B790	Project:- Phase-I	---	---	2	2	50	---
9	4B791	Industry Oriented Mini Project	---	---	---	2	25	50
10	4B792	CAD/CAM Lab	---	---	4	2	25	50
11	4B793	Production Drawing Practice Lab	---	---	4	2	25	50
12	4B794	Technical Paper Writing & Seminar-VII	---	---	2	1	25	---
Total			26	2	12	35	360	640

Professional Elective – I

4B725	Production Planning and Control
4B726	Automobile Engineering
4B727	Non-conventional Source of Energy
4B728	Jet propulsion and Rocket Engines

Professional Elective – II

4B729	Robotics
4B730	Mechatronics
4B731	Design for Manufacturing
4B732	Rapid Prototyping

IV Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max. Marks	
							INT	EXT
1	4ZC02	Management Science	4	---	---	4	30	70
2		Professional Elective - III	4	---	---	4	30	70
3	4B895	Project:- Phase-II	---	---	15	10	50	150
4	4B896	Comprehensive Viva-voce-III	---	---	---	2	---	50
5	4B897	Technical Paper Writing & Seminar -VIII	---	---	6	1	25	---
Total			8	---	21	21	135	340

Professional Elective – III

4B733		Automation in Manufacturing
4B734		Computational Fluid Dynamics
4B735		Quality Control and Reliability Engineering
4B736		Nano Technology