

VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

R15 -COURSE STRUCTURE

B.TECH I YEAR I SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical (P)	Total Hours	
A11001	English-I	2	0	0	2	2
A11002	Mathematics - I	4	1	0	5	3
A11003	Engineering Physics-I	3	1	0	4	3
A11501	C Programming	3	1	0	4	3
A11301	Engineering Graphics-I	2	0	3	5	3
A11302	Engineering Mechanics – I	3	1	0	4	3
A11581	C Programming Lab	0	0	3	3	2
A11081	English Language Communication Skills Lab-I	0	0	3	3	2
A11082	Engineering Physics Lab	0	0	3	3	2
A11381	Engineering Workshop	0	0	3	3	2
TOTAL		17	4	15	36	25

B.TECH I YEAR II SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A12005	English – II	2	0	0	2	2
A12006	Mathematics – II	4	1	0	5	3
A12007	Engineering Physics-II	3	1	0	4	3
A12008	Applied Chemistry	3	1	0	4	3
A12304	Engineering Mechanics – II	3	1	0	4	3
A12305	Engineering Graphics – II	2	0	3	5	3
A12085	English Language Communication Skills Lab-II	0	0	3	3	2
A12086	Engineering Physics and Chemistry Lab	0	0	3	3	2
A12087	IT & Engineering Workshop	0	0	3	3	2
TOTAL		17	4	12	33	23

B.TECH II YEAR I SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A13013	Numerical Methods	3	1	0	4	3
A13207	Electrical and Electronics Engineering	3	1	0	4	3
A13308	Mechanics of Solids	4	1	0	5	4
A13309	Thermodynamics	4	1	0	5	4
A13310	Metallurgy and Material science	4	1	0	5	4
A13011	Environmental science	3	1	0	4	2
A13283	Electrical and Electronics Engineering Lab	0	0	3	3	2
A13383	Metallurgy and Mechanics of solids Lab	0	0	3	3	2
A13MC2	Intellectual Property Rights And Cyber Laws	2	0	0	2	0
TOTAL		23	6	6	35	24

B.TECH II YEAR II SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A14312	Production Technology	3	1	0	4	3
A14313	Kinematics of Machinery	4	1	0	5	4
A14314	Thermal Engineering-I	3	1	0	4	3
A14315	Mechanics of Fluids and Hydraulic Machines	4	1	0	5	4
A14316	Machine Drawing	0	6	0	6	3
A14015	Probability and Statistics	3	0	0	3	3
A14384	Production Technology Lab	0	0	3	3	2
A14385	Mechanics of Fluids and Hydraulic Machines Lab	0	0	3	3	2
A14MC3	Professional Communication	2	0	0	2	0
TOTAL		19	10	6	35	24

B.TECH III YEAR I SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A15317	Design of Machine Members-I	3	1	0	4	3
A15318	Thermal Engineering-II	3	1	0	4	3
A15319	Dynamics of Machinery	3	1	0	4	3
A15320	Machine tools and Metrology	3	1	0	4	3
Professional Elective-1						
A15321	Automobile Engineerin	3	1	0	4	3
A15322	Computational Fluid Dynamics					
A15323	Welding Technology					
Open Elective-1						
A15324	Elements of Mechanical Engineering	3	1	0	4	3
A15348	Product Engineering					
A15386	Thermal Engineering lab	0	0	2	2	2
A15387	Metrology and machine Tools Lab	0	0	2	2	2
A15TP1	Personality Development & Behavioral Skills	2	0	0	2	2
TOTAL		20	6	4	30	24

B.TECH III YEAR II SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A16326	Design of Machine Members-II	3	1	0	4	3
A16327	Heat Transfer	3	1	0	4	3
A16328	Finite Element Methods	3	1	0	4	3
A16018	Managerial Economics and Financial Analysis	3	1	0	4	3
Professional Elective-2						
A16329	Refrigeration and Air Conditioning	3	1	0	4	3
A16330	Renewable Energy Sources					
A16331	Tool Design					
Open Elective-2						
A16332	Basic Automobile Engineering	3	1	0	4	3
A16333	Material Science Engineering					
A16388	Heat Transfer Lab	0	0	2	2	2
A16090	Advanced Communication Skills Lab	0	0	2	2	2
A16TP2	Quantitative Methods & Logical Reasoning	2	0	0	2	2
TOTAL		20	6	4	30	24

B.TECH IV YEAR I SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A17334	Operation Research	4	1	0	5	3
A17335	CAD/CAM	4	1	0	5	3
A17336	Mechanical Measurements and instrumentation	3	1	0	4	3
Professional Elective-3						
A17337	Robotics	3	1	0	4	3
A17338	Mechatronics					
A17339	Composite Materials					
Professional Elective-4						
A17340	CNC Technologies	3	1	0	4	3
A17341	Power plant Engineering					
A17342	Computer Graphics					
Open Elective-3						
A17343	Optimization Techniques	3	1	0	4	3
A17344	Maintenance and Safety Engineering					
A17389	Computer Aided Design and Manufacturing Lab	0	0	3	3	2
A17390	Production Drawing practice and Instrumentation lab	0	0	3	3	2
A173P1	Industry Oriented Mini Project	0	0	0	0	2
TOTAL		20	6	6	32	24

B.TECH IV YEAR II SEMESTER

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture(L)	Tutorial(T)	Practical (P)	Total Hours	
A18345	Production Planning And Control	3	1	0	4	3
A18346	Plant Layout And Material Handling	3	1	0	4	3
A18347	Unconventional Machining Processes	3	1	0	4	3
A183TS	Technical Seminar	0	0	6	6	2
A183CV	Comprehensive Viva	0	0	0	0	2
A183P2	Project work	0	0	0	0	11
TOTAL		9	3	6	18	24

COMPONENTS OF THE CURRICULUM

Course Component	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of Credits
Basic Sciences	11.4	42	22
Engineering Sciences	11.5	28	23
Humanities and Social Sciences	6.7	18	13
Program Core	50	85	96
Program Electives	6.2	16	12
Open Electives	4.7	12	9
Project(s)	6.7	20	13
Internships/Seminars	1.04	6	2
Any other (Please specify)	1.04	10	2
Total Number of Credits			192