

Scheme of Instruction & Scheme of Examination Bachelor of Engineering (Mechanical Engineering)

**Applicable for the students admitted in AY 2020-21
(R-20)**



**Department of Mechanical Engineering
VASAVI COLLEGE OF ENGINEERING (A) HYDERABAD**

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : FIRST SEMESTER (2020-2021)

B.E (MECH) I Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
THEORY								
U20HS110EH	English Language and Communication-I	2	-	-	3	60	40	2
U20BS110MA	Engineering Mathematics-I	3		-	3	60	40	3
U20BS020CH	Applied Chemistry	3	1	-	3	60	40	4
U20ES010CE	Basic Engineering Mechanics	3	-	-	3	60	40	3
U20ES120CE	Engineering Graphics-I	1	-	2	3	60	40	2
U20ES110CS	Introduction to programming	1	-	-	2	40	30	1
PRACTICALS								
U20HS111EH	English Language and Communication Skills Lab-I	-	-	2	3	50	30	1
U20BS011CH	Chemistry Lab	-	-	2	3	50	30	1
U20ES111ME	Engineering Workshop-I	-	-	2	3	50	30	1
TOTAL		13	1	8		490	320	18
GRAND TOTAL		22				810		18
Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : SECOND SEMESTER (2020-2021)

B.E (MECH) II Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
THEORY								
U20HS210EH	English Language and Communication-II	2	-	-	3	60	40	2
U20BS210MA	Engineering Mathematics-II	3		-	3	60	40	3
U20BS020PH	Applied Physics	3	1	-	3	60	40	4
U20ES220CE	Engineering Graphics-II	1	-	2	3	60	40	2
U20ES210CS	Programming for Engineers	3	-	-	3	60	40	3
U20ES210CE	Engineering Mechanics	3		-	3	60	40	3
PRACTICALS								
U20HS211EH	English language and communication skills Lab-II	-	-	2	3	50	30	1
U20BS021PH	Applied Physics Lab	-	-	2	3	50	30	1
U20ES211CS	Programming Lab	-	-	2	3	50	30	1
U20ES221ME	Engineering Workshop –II	-	-	2	3	50	30	1
TOTAL		15	1	10		560	360	21
GRAND TOTAL		26				920		21
Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : THIRD SEMESTER (2021-2022)

B.E (MECH) III Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
U20HS330EH	Skill Development-I (Communication Skills-I)	1	0	0	2	40	30	1
U20BS330MA	Skill Development-II (Aptitude-I)	1	0	0	2	40	30	1
U20HS010EH	Human Values and Professional Ethics-I	1	0	0	2	40	30	1
U20BS310MA	Partial Differential Equations & Transform Calculus	3	0	0	3	60	40	3
U20ES310CE	Mechanics of Materials	3	0	0	3	60	40	3
U20PC310ME	Materials Engineering	3	0	0	3	60	40	3
U20PC320ME	Thermodynamics	3	0	0	3	60	40	3
U20PC330ME	Machine Drawing	1	0	4	3	60	40	3
U20OE3XXXX	Open Elective-I	2	0	0	3	60	40	2
U20MC310ME	Introduction to Entrepreneurship	1	0	0	2	40	30	0
PRACTICALS								
U20ES311CE	Mechanics of Materials Lab	0	0	2	3	50	30	1
U20PC311ME	Materials Engineering Lab	0	0	2	3	50	30	1
TOTAL		19	0	8		620	420	22
GRAND TOTAL		27				1040		22
1) Student should acquire one online course certificate equivalent to two credits during III to VII semester 2) Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC / CCA / ECA								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : FOURTH SEMESTER (2021-2022)

B.E (MECH) IV Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
U20BS430MA	Skill Development-III (Aptitude-II)	1	0	0	2	40	30	1
U20PE430ME	Skill Development-IV (Technical Skills-I)	1	0	0	2	40	30	1
U20BS410MA	Numerical Methods, Probability & Statistics	3	0	0	3	60	40	3
U20ES410EE	Basic Electrical and Electronics Engineering	3	0	0	3	60	40	3
U20PC410ME	Applied Thermodynamics	3	0	0	3	60	40	3
U20PC420ME	Mechanics of Fluids and Hydraulic Machines	3	0	0	3	60	40	3
U20PC430ME	Kinematics of Machines	3	0	0	3	60	40	3
U20OE4XXXX	Open Elective II	3	0	0	3	60	40	3
PRACTICALS								
U20ES411EE	Basic Electrical and Electronics Engineering Lab	0	0	2	3	50	30	1
U20PC421ME	Fluid Mechanics and Hydraulic Machines Lab	0	0	2	3	50	30	1
U20PC411ME	Applied Thermodynamics lab	0	0	2	3	50	30	1
TOTAL		20	0	6		590	390	23
GRAND TOTAL		26				980		23
1) Student should acquire one online course certificate equivalent to two credits during III to VII semester 2) Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC / CCA								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : FIFTH SEMESTER (2022-2023)

B.E (MECH) V Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
THEORY								
U20HS510EH	Skill Development-V (Communication Skills-II)	1	0	0	2	40	30	1
U20PE510ME	Skill Development-VI (Technical Skills-II)	1	0	0	2	40	30	1
U20HS020EH	Human Values and Professional Ethics-II	1	0	0	2	40	30	1
U20PC510ME	Heat Transfer	3	0	0	3	60	40	3
U20PC520ME	Metrology & Instrumentation	3	0	0	3	60	40	3
U20PC530ME	Dynamics of Machines	3	0	0	3	60	40	3
U20PC540ME	Manufacturing Processes	3	0	0	3	60	40	3
U20PC550ME	Design of Machine Elements	3	0	0	3	60	40	3
U20OE5XXXX	Open Elective - III	3	0	0	3	60	40	3
PRACTICALS								
U20PC531ME	Dynamics & Metrology Lab	0	0	2	3	50	30	1
U20PC541ME	Manufacturing Processes Lab	0	0	2	3	50	30	1
U20PW519ME	Mini Project	0	0	2	-	0	30	1
TOTAL		21	0	6		580	420	24
GRAND TOTAL		27				1000		24
1) Student should acquire one online course certificate equivalent to two credits during III to VII semester 2) Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC / CCA / ECA								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : SIXTH SEMESTER (2022-2023)

B.E (MECH) VI Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
U20BS610MA	Skill Development-VII (Aptitude-III)	1	0	0	2	40	30	1
U20PE610ME	Skill Development-VIII (Technical Skills-III)	1	0	0	2	40	30	1
U20PC620ME	CAD/CAM	3	0	0	3	60	40	3
U20PC630ME	Machine Design	3	0	0	3	60	40	3
U20PC640ME	Metal cutting & Machine tools	3	0	0	3	60	40	3
U20PE6xxME	Professional Elective - I	3	0	0	3	60	40	3
U20OE6XXXX	Open Elective-IV	3	0	0	3	60	40	3
U20MC010CE	Environmental Science	2	0	0	3	60	40	0
PRACTICALS								
U20PC621ME	CAD/CAM Lab	0	0	2	3	50	30	1
U20PC641ME	Machine Tools Lab	0	0	2	3	50	30	1
U20PW619ME	Theme Based Project	0	0	2	-	-	30	1
TOTAL		19	0	6		540	390	20
GRAND TOTAL		25				930		20
1) Student should acquire one online course certificate equivalent to two credits during III to VII semester 2) Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC / CCA / ECA								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : SEVENTH SEMESTER (2023-2024)

B.E (MECH) VII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	D/P		SEE	CIE	
THEORY								
U20HS040EH	Economics and Finance for Engineers	2	0	0	3	60	40	2
U20PC710ME	Thermal Turbo Machines	3	0	0	3	60	40	3
U20PC720ME	Finite Element Analysis	3	0	0	3	60	40	3
U20PE7XXME	Professional Elective – II	3	0	0	3	60	40	3
U20PE7XXME	Professional Elective – III	3	0	0	3	60	40	3
U20PE7XXME	Professional Elective – IV	3	0	0	3	60	40	3
PRACTICALS								
U20PC711ME	Thermal Engineering Lab	0	0	2	3	50	30	1
U20PC721ME	Computer Aided Engineering Lab	0	0	2	3	50	30	1
U20PW719ME	Project Seminar	0	0	2	-	-	30	1
TOTAL		17	0	6	-	460	330	20
GRAND TOTAL		23				790		20
1) Student should acquire one online course certificate equivalent to two credits during III to VII semester 2) Left over hours allotted to Sports / Library / Mentor Interaction / CC / RC / TC								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – MECH : EIGHTH SEMESTER (2023-2024)

B.E (MECH) VIII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	D/P		SEE	CIE	
THEORY								
U20PE8XXME	Professional Elective – V	3	0	0	3	60	40	3
U20PE8XXME	Professional Elective – VI	3	0	0	3	60	40	3
PRACTICALS								
U20PW819ME	Project / Internship	0	0	12	Viva-Voce	50	50	6
	TOTAL	6	-	12		170	130	12
	GRAND TOTAL	18				300		12
Students are awarded with two credits for completion of online course.								