Visvesvaraya Technological University, Belagavi

REGULATIONS GOVERNING
THE DEGREE OF BACHELOR OF ENGINEERING/ TECHNOLOGY (B.E/B.Tech)
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)
Effective from the academic year 2017–18

Annexure -1

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Scheme of Teaching and Examination 2017-2018
Choice Based Credit System (CBCS)

I SEMESTER B.E./B.Tech (CHEMISTRY GROUP)

Sl. No	Course Code	Course Title	Teaching Department	Board	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17MAT11	Engineering Mathematics -I	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17CHE12	Engineering Chemistry	Chemistry	Basic Science	04	--	03	60	40	100	4
3	17PCD13	Programming in C and Data Structures	Any Engineering Department	Computer Science and Engineering	04	--	03	60	40	100	4
4	17CED14	Computer Aided Engineering Drawing	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	02Hour Instruction 04Hour Practice		03	60	40	100	4
5	17ELN17	Basic Electronics	ECE/EEE/TC/E and I.	E and C Engineering	04	--	03	60	40	100	4
6	17CPL16	Computer Programming Laboratory	Any Engineering Department	Computer Science and Engineering	01Hour Tutorial 02Hour Practical		03	60	40	100	2
7	17CHEL17	Engineering Chemistry Laboratory	Chemistry	Basic Science	01Hour Tutorial 02Hour Practical		03	60	40	100	2
8	17CIV18	Environmental Studies (Audit Course)	Civil/ Environmental Engineering	Civil Engineering	01HourTutorial		--	30	20	50	--
				TOTAL	Theory:21 hours Practical: 08 hours		21	450	300	750	24

II SEMESTER B.E./B.Tech (PHYSICS GROUP)

1	17MAT21	Engineering Mathematics -II	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17PHY22	Engineering Physics	Physics	Basic Science	04	--	03	60	40	100	4
3	17CIV23	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	04	--	03	60	40	100	4
4	17EME24	Elements of Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	04	--	03	60	40	100	4
5	17ELE25	Basic Electrical Engineering	E and E Engineering	E and E Engineering	04	--	03	60	40	100	4
6	17WSL26	Workshop Practice	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	01-Hour Instruction 02-Hour Practical		03	60	40	100	2
7	17PHYL27	Engineering Physics Laboratory	Physics	Basic Science	01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17ENG28	Language – English (Audit Course)	Humanities	--	01		--	--	--	--	--
				TOTAL	Theory:21 hours Practical: 06 hours		21	420	280	700	24

B.E. Mechanical Engineering
III SEMESTER

Sl. No.	Subject Code	Title	Teaching Department	Teaching Hours /Week			Examination				Credits
				Lecture	Tutorial	Practical	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17MAT31	Engineering Mathematics – III	Maths	04			03	60	40	100	4
2	17ME32	Materials Science	ME	04			03	60	40	100	4
3	17ME33	Basic Thermodynamics	ME	03	02		03	60	40	100	4
4	17ME34	Mechanics of Materials	ME	03	02		03	60	40	100	4
5	17ME35A/ 17ME35B	Metal Casting and Welding	ME	04			03	60	40	100	4
		Machine Tools and Operations	ME								
6	17ME36A/ 17ME36B	Computer Aided Machine Drawing	ME	01		4	03	60	40	100	3
		Mechanical Measurements and Metrology	ME	03							
7	17MEL37A/ 17MEL37B	Materials Testing Lab/	ME	1		2	03	60	40	100	2
		Mechanical Measurements and Metrology Lab	ME								
8	17MEL38A/ 17MEL38B	Foundry and Forging Lab	ME	1		2	03	60	40	100	2
		Machine Shop/	ME								
9	17KL/CPH39 /49	Kannada/Constitution of India, Professional Ethics and Human Rights	Humanities	1			01	30	20	50	1
TOTAL				22/24	04	08/04		510	340	850	28

B.E. Mechanical Engineering

IV SEMESTER

Sl. No	Subject Code	Title	Teaching Department	Teaching Hours /Week			Examination				Credits
				Lecte	Tutorial	Practical	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17MAT41	Engineering Mathematics – III	Maths	04			03	60	40	100	04
2	17ME42	Kinematics of Machinery	ME	03	02		03	60	40	100	04
3	17ME43	Applied Thermodynamics	ME	03	02		03	60	40	100	04
4	17ME44	Fluid mechanics	ME	03	02		03	60	40	100	04
5	17ME45A/ 17ME45B	Metal Casting and Welding	ME	04			03	60	40	100	04
		Machine Tools and Operations	ME								
6	17ME46 A/ 17ME46B	Computer Aided Machine Drawing	ME	01		4	03	60	40	100	03
		Mechanical Measurements and Metrology	ME	03							
7	17MEL47A/ 17MEL47B	Materials Testing Lab/	ME	1		2	03	60	40	100	02
		Mechanical Measurements and Metrology Lab	ME								
8	17MEL48A/ 17MEL48B	Foundry and Forging Lab	ME	1		2	03	60	40	100	02
		Machine Shop/	ME								
9	17KL/CPH39/ 49	Kannada/Constitution of India, Professional Ethics and Human Rights	Humanities	1			01	30	20	50	1
TOTAL				**21/23**	**06**	**08/04**		**510**	**340**	**850**	**28**

B.E. Mechanical Engineering

V SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17ME51	Management and Engineering Economics	3	2	0	03	60	40	100	4
2	17ME52	Dynamics of Machinery	3	2	0	03	60	40	100	4
3	17ME53	Turbo Machines	3	2	0	03	60	40	100	4
4	17ME54	Design of Machine Elements - I	3	2	0	03	60	40	100	4
5	17ME55X	Professional Elective-I	3	0	0	03	60	40	100	3
6	17ME56X	Open Elective-I	3	0	0	03	60	40	100	3
7	17MEL57	Fluid Mechanics & Machinery Lab	1	0	2	03	60	40	100	2
8	17MEL58	Energy Lab	1	0	2	03	60	40	100	2
TOTAL			**20**	**08**	**04**		**480**	**320**	60	40

Professional Elective-I		Open Elective-I	
17ME551	Refrigeration and Air-conditioning	17ME561	Optimization Techniques
17ME552	Theory of Elasticity	17ME562	Energy and Environment
17ME553	Human Resource Management	17ME563	Automation and Robotics
17ME554	Non Traditional Machining	17ME564	Project Management

1. **Core subject:** This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.
2. **Professional Elective:** Elective relevant to chosen specialization/ branch
3. **Open Elective**: Electives from other technical and/or emerging subject areas.

B.E. Mechanical Engineering

VI SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17ME61	Finite Element Analysis	3	2	0	03	60	40	100	4
2	17ME62	Computer integrated Manufacturing	4	0	0	03	60	40	100	4
3	17ME63	Heat Transfer	3	2	0	03	60	40	100	4
4	17ME64	Design of Machine Elements -II	3	2	0	03	60	40	100	4
5	17ME65X	Professional Elective-II	3	0	0	03	60	40	100	3
6	17ME66X	Open Elective-II	3	0	0	03	60	40	100	3
7	17MEL67	Heat Transfer Lab	1	0	2	03	60	40	100	2
8	17MEL68	Modeling and Analysis Lab(FEA)	1	0	2	03	60	40	100	2
TOTAL			**21**	**6**	**04**		**480**	**320**	60	40

Professional Elective-II		Open Elective-II	
17ME651	Computational Fluid Dynamics	17ME661	Energy Auditing
17ME652	Mechanics of Composite Materials	17ME662	Industrial Safety
17ME653	Metal Forming	17ME663	Maintenance Engineering
17ME654	Tool Design	17ME664	Total Quality Management
17ME655	Automobile Engineering		

1. **Core subject:** This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.
2. **Professional Elective:** Elective relevant to chosen specialization/ branch
3. **Open Elective**: Electives from other technical and/or emerging subject areas.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI
CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION (2017)

B.E. in MECHANICAL ENGINEERING

VII SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture (L)	Tutorial (T)	Practical (P)	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17ME71	Energy Engineering	3	2	0	03	60	40	100	4
2	17ME72	Fluid Power Systems	4	0	0	03	60	40	100	4
3	17ME73	Control Engineering	3	2	0	03	60	40	100	4
4	17ME74X	Professional Elective - III	3	0	0	03	60	40	100	3
5	17ME75X	Professional Elective-IV	3	0	0	03	60	40	100	3
6	17MEL76	Design Lab	1	0	2	03	60	40	100	2
7	17MEL77	CIM Lab	1	0	2	03	60	40	100	2
8	17MEP78	Project Phase – I	-	-	03	-	--	100	100	2
TOTAL			**18**	**4**	**07**	**21**	**420**	**380**	**800**	**24**

Professional Elective-III	
17ME741	Design of Thermal Equipment's
17ME742	Tribology
17ME743	Financial Management
17ME744	Design for Manufacturing
17ME745	Smart Materials & MEMS

Professional Elective-IV	
17ME751	Automotive Electronics
17ME752	Fracture Mechanics
17ME753	**Mechatronics**
17ME754	**Advanced Vibrations**

Core subject: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study. **Professional Elective:** Elective relevant to chosen specialization/ branch

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B.E. in MECHANICAL ENGINEERING

VIII SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	SEE Marks	CIE Marks	Total Marks	
1	17ME81	Operations Research	03	02	00	03	60	40	100	4
2	17ME82	Additive Manufacturing	04	00	00	03	60	40	100	4
3	17ME83X	Professional Elective - V	03	00	00	03	60	40	100	3
4	17ME84	Internship / Professional Practice	Industry Oriented			03	50	50	100	2
5	17ME85	Project Phase – II	--	06	--	03	100	100	200	6
6	17MES86	Seminar	--	04	--	--	--	100	100	1
TOTAL			**10**	**12**	**00**	15	**330**	**370**	**700**	**20**

Professional Elective-V	
15ME831	Cryogenics
15ME832	Experimental Stress Analysis
15ME833	Theory of Plasticity
15ME834	Green Manufacturing
15ME835	Product life cycle management

Core subject: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study. **Professional Elective:** Elective relevant to chosen specialization/ branch. **Internship / Professional Practice:** To be carried out between 6th& 7th semester vacation or 7th& 8th semester vacation. As per 2017 regulation Internship CIE marks are 50(25 seminar and 25- report) and SEE 50 for viva-voce.