

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**SCHEME OF TEACHING AND EXAMINATION 2015-2016**

**I SEMESTER B.E./B.TECH.**

**PHYSICS GROUP**

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
							Th./Pr.	I.A.	Total	
1	15MAT11	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	15PHY12	Engineering Physics	BS	Physics	Basic Sc.	4 (T)	80	20	100	4
3	15CIV13	Elements of Civil Engg. & Mechanics	ES	Civil Engg.	Civil Engg.	4 (T)	80	20	100	4
4	15EME14	Elements of Mechanical Engg.	ES	Mech. Engg.	Mech. Engg.	4 (T)	80	20	100	4
5	15ELE15	Basic Electrical Engg.	ES	E & E	E & E	4 (T)	80	20	100	4
6	15WSL16	Workshop Practice	ES	Mech., Auto, IP, IEM, Mfg. Engg.	Mech. Engg.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
7	15PHYL17	Engg. Physics Lab	BS	Physics	Basic Sc.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
8	15CPH18	Constitution of India, Professional Ethics and Human Rights (CPH)	MNC	Humanities		2 (Tutorial)	40	10	50	--
9		Language (Kan.)	Mandatory Learning	Humanities		1 (T)	-	-	-	--
						29	600	150	750	24

Note: The Subjects Kannada and English are Audit Courses

**PRINCIPAL**

Sri Venkateshwara College of Engineering  
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**SCHEME OF TEACHING AND EXAMINATION 2015-2016**

**II SEMESTER B.E./B.TECH.**

**PHYSICS GROUP**

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
							Th./Pr.	I.A.	Total	
1	15MAT21	Engineering Maths-II	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	15PHY22	Engineering Physics	BS	Physics	Basic Sc.	4 (T)	80	20	100	4
3	15CIV23	Elements of Civil Engg. & Mechanics	ES	Civil Engg.	Civil Engg.	4 (T)	80	20	100	4
4	15EME24	Elements of Mechanical Engg.	ES	Mech. Engg.	Mech. Engg.	4 (T)	80	20	100	4
5	15ELE25	Basic Electrical Engg.	ES	E & E	E & E	4 (T)	80	20	100	4
6	15WSL26	Workshop Practice	ES	Mech., Auto, IP, IEM, Mfg. Engg.	Mech. Engg.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
7	15PHYL27	Engg. Physics Lab	BS	Physics	Basic Sc.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
8	15CPH28	Constitution of India, Professional Ethics and Human Rights	MNC	Humanities		2 (Tutorial)	40	10	50	--
9		Language (Kan.)	Mandatory Learning	Humanities		1 (T)	-	-	-	--
						29	600	150	750	24

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**I SEMESTER B.E./B.TECH.**

**CHEMISTRY GROUP**

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
							Th./Pr.	I.A.	Total	
1	15MAT11	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	15CHE12	Engineering Chemistry	BS	Chemistry	Basic Sc.	4 (T)	80	20	100	4
3	15PCD13	Programming in C & Data Structures	ES	Any Engineering Department	CSE	4 (T)	80	20	100	4
4	15CED14	Computer Aided Engineering Drawing	ES	Mech./IP/Auto/ Mfg.Engg./ IEM	Mech. Engg.	6 (2I+ 4P)	80	20	100	4
5	15ELN15	Basic Electronics	ES	E & C / E & E / TC / IT	E & C	4 (T)	80	20	100	4
6	15CPL16	Computer Programming Lab	ES	Any Engineering Department	CSE	3(2 hrs lab+ 1 hr Tutorial )	80	20	100	2
7	15CHEL17	Engg. Chemistry Lab	BS	Chemistry	Basic Sci.	3(2 hrs lab+ 1 hr Tutorial )	80	20	100	2
8	15CIV18	Environmental Studies	MNC	Civil / Environmental	Civil	2 (Tutorial)	40	10	50	--
9		Language (Eng.)	Mandatory Learning	Humanities		1 (T)	-	-	-	--
<b>Total</b>						<b>31</b>	<b>600</b>	<b>150</b>	<b>750</b>	<b>24</b>

Note: The Subjects Kannada and English are Audit Courses

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**II SEMESTER B.E./B.TECH.**

**CHEMISTRY GROUP**

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
							Th./Pr.	I.A.	Total	
1	15MAT21	Engineering Maths-II	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	15CHE22	Engineering Chemistry	BS	Chemistry	Basic Sc.	4 (T)	80	20	100	4
3	15PCD23	Programming in C & Data Structures	ES	Any Engineering Department	CSE	4 (T)	80	20	100	4
4	15CED24	Computer Aided Engineering Drawing	ES	Mech./IP/Auto/ Mfg.Engg./ IEM	Mech. Engg.	6 (21+ 4P)	80	20	100	4
5	15ELN25	Basic Electronics	ES	E & C / E & E / TC / IT	E & C	4 (T)	80	20	100	4
6	15CPL26	Computer Programming Lab	ES	Any Engineering Department	CSE	3(2 hrs lab+ 1 hr Tutorial )	80	20	100	2
7	15CHEL27	Engg. Chemistry Lab	BS	Chemistry	Basic Sc.	3(2 hrs lab+ 1 hr Tutorial )	80	20	100	2
8	15CIV28	Environmental Studies	MNC	Civil/ Environmental	Civil	2 (Tutorial)	40	10	50	--
9		Language (Eng.)	Mandatory Learning	Humanities		1 (T)	-	-	-	--
<b>Total</b>						<b>31</b>	<b>600</b>	<b>150</b>	<b>750</b>	<b>24</b>

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B.E. Mechanical Engineering

III SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks	Total Marks	
1	15MAT31	Engineering Mathematics – III	04			03	80	20	100	4
2	15ME32	Materials Science	04			03	80	20	100	4
3	15ME33	Basic Thermodynamics	03	02		03	80	20	100	4
4	15ME34	Mechanics of Materials	03	02		03	80	20	100	4
5	15ME35A/	Metal Casting and Welding	04			03	80	20	100	4
	15ME35B	Machine Tools and Operations								
6	15ME36 A/	Computer Aided Machine Drawing	02		4	03	80	20	100	3
	15ME36B	Mechanical Measurements and Metrology	04							
7	15MEL37A/	Materials Testing Lab/	1		2	03	80	20	100	2
	15MEL37B	Mechanical Measurements and Metrology Lab								
8	15MEL38A/	Foundry and Forging Lab	1		2	03	80	20	100	2
	15MEL38B	Machine Shop/								
TOTAL			22/24	04	08/04		640	160	800	27

24.04.2019  
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B.E. Mechanical Engineering

IV SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks	Total Marks	
1	15MAT41	Engineering Mathematics – III	04			03	80	20	100	04
2	15ME42	Kinematics of Machinery	03	02		03	80	20	100	04
3	15ME43	Applied Thermodynamics	03	02		03	80	20	100	04
4	15ME44	Fluid mechanics	03	02		03	80	20	100	04
5	15ME45A/	Metal Casting and Welding	04			03	80	20	100	04
	15ME45B	Machine Tools and Operations								
6	15ME46 A/	Computer Aided Machine Drawing	02		4	03	80	20	100	03
	15ME46B	Mechanical Measurements and Metrology	04							
7	15MEL47A /	Materials Testing Lab/	1		2	03	80	20	100	02
	15MEL47B	Mechanical Measurements and Metrology Lab								
8	15MEL48A /	Foundry and Forging Lab	1		2	03	80	20	100	02
	15MEL48B	Machine Shop/								
TOTAL			19/21	06	08/04		640	160	800	27

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**B.E. Mechanical Engineering**

**V SEMESTER**

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks	Total Marks	
1	15ME51	Management and Engineering Economics	3	2	0	03	80	20	100	4
2	15ME52	Dynamics of Machinery	3	2	0	03	80	20	100	4
3	15ME53	Turbo Machines	3	2	0	03	80	20	100	4
4	15ME54	Design of Machine Elements - I	3	2	0	03	80	20	100	4
5	15ME55X	Professional Elective-I	3	0	0	03	80	20	100	3
6	15ME56X	Open Elective-I	3	0	0	03	80	20	100	3
7	15MEL57	Fluid Mechanics & Machinery Lab	1	0	2	03	80	20	100	2
8	15MEL58	Energy Lab	1	0	2	03	80	20	100	2
<b>TOTAL</b>			<b>21</b>	<b>06</b>	<b>04</b>		<b>640</b>	<b>160</b>	<b>800</b>	<b>26</b>

Professional Elective-I		Open Elective-I	
15ME551	Refrigeration and Air-conditioning	15ME561	Optimization Techniques
15ME552	Theory of Elasticity	15ME562	Energy and Environment
15ME553	Human Resource Management	15ME563	Automation and Robotics
15ME554	Non Traditional Machining	15ME564	Project Managemet

- 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.

  
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**B.E. Mechanical Engineering**

**VI SEMESTER**

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination			Credits	
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks		Total Marks
1	15ME61	Finite Element Analysis	3	2	0	03	80	20	100	4
2	15ME62	Computer integrated Manufacturing	4	0	0	03	80	20	100	4
3	15ME63	Heat Transfer	3	2	0	03	80	20	100	4
4	15ME64	Design of Machine Elements -II	3	2	0	03	80	20	100	4
5	15ME65X	Professional Elective-II	3	0	0	03	80	20	100	3
6	15ME66X	Open Elective-II	3	0	0	03	80	20	100	3
7	15MEL67	Heat Transfer Lab	1	0	2	03	80	20	100	2
8	15MEL68	Modeling and Analysis Lab(FEA)	1	0	2	03	80	20	100	2
<b>TOTAL</b>			<b>21</b>	<b>6</b>	<b>04</b>		<b>640</b>	<b>160</b>	<b>800</b>	<b>26</b>

Professional Elective-II		Open Elective-II	
15ME651	Computational Fluid Dynamics	15ME661	Energy Auditing
15ME652	Mechanics of Composite Materials	15ME662	Industrial Safety
15ME653	Metal Forming	15ME663	Maintenance Engineering
15ME654	Tool Design	15ME664	Total Quality Management
15ME655	Automobile Engineering		

- 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
- Open Elective:** Electives from other technical and/or emerging subject areas.

  
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B.E. Mechanical Engineering

VII SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination				Credits
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks	Total Marks	
1	15ME71	Energy Engineering	3	2	0	03	80	20	100	4
2	15ME72	Fluid Power Systems	4	0	0	03	80	20	100	4
3	15ME73	Control Engineering	3	2	0	03	80	20	100	4
4	15ME74X	Professional Elective - III	3	0	0	03	80	20	100	3
5	15ME75X	Professional Elective-IV	3	0	0	03	80	20	100	3
6	15MEL76	Design Lab	1	0	2	03	80	20	100	2
7	15MEL77	CIM Lab	1	0	2	03	80	20	100	2
8	15MEP78	Project Phase – I	-	-	-	-	-	100	100	2
<b>TOTAL</b>			<b>18</b>	<b>4</b>	<b>04</b>		<b>560</b>	<b>240</b>	<b>800</b>	<b>24</b>

Professional Elective-III		Professional Elective-IV	
15ME741	Design of Thermal Equipments	15ME751	Automotive Electronics
15ME742	Tribology	15ME752	Fracture Mechanics
15ME743	Financial Management	15ME753	Mechatronics
15ME744	Design for Manufacturing	15ME754	Advanced Vibrations
15ME745	Smart Materials & MEMS		

- 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. Mechanical Engineering

**VIII SEMESTER**

Sl. No	Subject Code	Title	Teaching Hours /Week			Examination			Credits	
			Lecture	Tutorial	Practical	Duration (Hours)	Theory/ Practical Marks	I.A. Marks		Total Marks
1	15ME81	Operations Research	3	2	0	03	80	20	100	4
2	15ME82	Additive Manufacturing	4	0	0	03	80	20	100	4
3	15ME83X	Professional Elective - V	3	0	0	03	80	20	100	3
4	15ME84	Internship / Professional Practice	Industry Oriented			03	50	50	100	2
5	15ME85	Project Phase – II	-	6	-	03	100	100	200	6
6	15MES86	Seminar	-	4	-	-	-	100	100	1
<b>TOTAL</b>			<b>10</b>	<b>12</b>	<b>-</b>		<b>390</b>	<b>310</b>	<b>700</b>	<b>20</b>

**Professional Elective-V**

15ME831	Cryogenics
15ME832	Experimental Stress Analysis
15ME833	Theory of Plasticity
15ME834	Green Manufacturing
15ME835	Product life cycle 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. **Internship / Professional Practice:** To be carried out between 6<sup>th</sup> & 7<sup>th</sup> semester vacation or 7<sup>th</sup> & 8<sup>th</sup> semester vacation.

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