

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**SCHEME OF TEACHING AND EXAMINATION 2015-16**

**B.E. Manufacturing Science & Engineering**

**V SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours /week		Examination				Credits
			Theory	Practical / Drawing	Duration	Theory / Practical Marks	IA Marks	Total	
1	15MA51	Management and Entrepreneurship	04		03	80	20	100	04
2	15MA52	Computer Aided Design & Manufacturing	04		03	80	20	100	04
3	15MA53	Metal Forming	04		03	80	20	100	04
4	15MA54	Elements of Machine Design	04		03	80	20	100	04
5	15MA55X	Professional Elective -I	03		03	80	20	100	03
6	15MA56X	Open Elective –I	03		03	80	20	100	03
7	15MAL57	Machine Shop	-	01L + 02P	03	80	20	100	02
8	15MAL58	Computer Aided Design & Manufacturing Laboratory	-	01L + 02P	03	80	20	100	02
<b>Total</b>			22	06		640	160	800	26

Professional Elective -I		Open Elective -I	
15MA551	Product Design	15MA561	Mechatronics
15MA552	Machine Tool Design	15MA562	Theory of Elasticity
15MA553	Maintenance Engineering	15MA563	Knowledge Management
15MA554	Surface Engineering	15MA564	Data Structures

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**VI SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours /week		Examination				Credits
			Theory	Practical / Drawing	Duration	Theory / Practical Marks	IA Marks	Total	
1	15MA61	Engineering Economics	04		03	80	20	100	04
2	15MA62	Computer Integrated Manufacturing	04		03	80	20	100	04
3	15MA63	Additive Manufacturing	04		03	80	20	100	04
4	15MA64	Statistical Quality Control	04		03	80	20	100	04
5	15MA65X	Professional Elective -II	03		03	80	20	100	03
6	15MA66X	Open Elective –II	03		03	80	20	100	03
7	15MAL67	Non Destructive Testing Laboratory	-	01L+02P	03	80	20	100	02
8	15MAL68	Additive Manufacturing Laboratory	-	01L+02P	03	80	20	100	02
<b>Total</b>			22	06		640	160	800	26

Professional Elective -II		Open Elective -II	
15MA651	Finite Element Method	15MA661	Microprocessor & Microcontrollers
15MA652	Quality Assurance	15MA662	Theory of Elasticity
15MA653	Jigs & Fixtures	15MA663	Sensors
15MA654	Material Handling Equipments	15MA664	Data Mining

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**VII SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours /week		Examination				Credits
			Theory	Practical / Drawing	Duration	Theory / Practical Marks	IA Marks	Total	
1	15MA71	Operation Research	04		03	80	20	100	04
2	15MA72	Hydraulic Circuits & Program Logic controllers	04		03	80	20	100	04
3	15MA73	Control Engineering	04		03	80	20	100	04
4	15MA74X	Professional Elective –III	03		03	80	20	100	03
5	15MA75X	Professional Elective –IV	03		03	80	20	100	03
6	15MAL76	Modeling & Simulation Laboratory		01L+02P	03	80	20	100	02
7	15MAL77	Hydraulic Circuits & Program Logic controllers Laboratory		01L+02P	03	80	20	100	02
8	15MAP78	Project Phase – I Seminar					100	100	02
<b>Total</b>			18	06		560	240	800	24

Professional Elective –III		Professional Elective -IV	
15MA751	Facility Planning and Design	15MA761	Operation Management
15MA752	Non Traditional Machining	15MA762	Reliability Engineering
15MA753	Process Planning	15MA763	Materials Management
15MA754	Precision Engineering	15MA764	Smart Materials

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**VIII SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours /week		Examination			Credits	
			Theory	Practical / Drawing	Duration	Theory / Practical Marks	IA Marks		Total
1	15MA81	Total Quality Management	04		03	80	20	100	04
2	15MA82	Industrial Robotics	04		03	80	20	100	04
3	15MA83X	Professional Elective – V	03		03	80	20	100	03
4	15MA84	Internship / Professional Practice	Industry Oriented		03	50	50	100	02
5	15MAP85	Project Work Phase -II	-	06	03	100	100	200	06
6	15MAS86	Seminar		04			100	100	01
<b>Total</b>			11	10		390	310	700	20

<b>Department Elective-V</b>	
15MA831	Non Destructive Testing
15MA832	Product Life Cycle Management
15MA833	Management Information System
15MA834	Flexible Manufacturing Systems