

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**SCHEME OF TEACHING AND EXAMINATION 2015-2016**  
**III Semester B.E. Marine Engineering**

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/ practical marks	IA Marks	Total Marks	
1	15MAT31	Engineering Mathematics – III (core)	04		03	80	20	100	4
2	15MR32	Material Science & Metallurgy (core)	04		03	80	20	100	4
3	15MR33	Basic Thermodynamics(core)	04		03	80	20	100	4
4	15MR34	Mechanics of materials(core)	04		03	80	20	100	4
5	15MR35	Elementary Navigation Seamanship and survival at sea(core)	04		03	80	20	100	4
6	15MR36	Measurement and Metrology(foundation course)	04		03	80	20	100	4
7	15MRL37	Material Testing Lab		1I+2P	03	80	20	100	2
8	15MRL38	Machine Shop and Foundry Lab		1I+2P	03	80	20	100	2
Total			24	6	24	640	160	800	28

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. Foundation Course: The courses based upon the content that leads to Knowledge enhancement.

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**SCHEME OF TEACHING AND EXAMINATION 2015-2016**  
 IV Semester B.E. Marine Engineering

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/practical marks	IA Marks	Total Marks	
1	15MAT41	Engineering Mathematics – IV (Core)	04		03	80	20	100	4
2	15MR42	Dynamics of machines(core)	04		03	80	20	100	4
3	15MR43	Applied Thermodynamics (core)	04		03	80	20	100	4
4	15MR44	Ship Structure and Construction(core)	04		03	80	20	100	4
5	15MR45	Marine Heat Engine and Air conditioning(core)	04		03	80	20	100	4
6	15MR46	Fluid Mechanics(foundation course)	04		03	80	20	100	4
7	15MRL47	Measurements and Metrology Lab		1I+2P	03	80	20	100	2
8	15MRL48	Computer Aided Marine Engineering Drawing		1I+2P	03	80	20	100	2
Total			24	6	24	640	160	800	28

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V Semester B.E. Marine Engineering

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/practical marks	IA Marks	Total Marks	
1	15MR51	Naval architecture (Core)	04		03	80	20	100	4
2	15MR52	Marine Internal Combustion Engine-I (core)	04		03	80	20	100	4
3	15MR53	Marine Auxiliary Machines-I (core)	04		03	80	20	100	4
4	15MR54	Turbo Machines (core)	04		03	80	20	100	4
5	15MR55x	Professional Elective-1	03		03	80	20	100	3
6	15MR56x	Open Elective -1	03		03	80	20	100	3
7	15MRL57	Marine Engine Lab		11+2P	03	80	20	100	2
8	15MRL58	Fluid Mechanics and Machines lab		11+2P	03	80	20	100	2
Total			22	6	24	640	160	800	26

Professional Elective-1		Open Elective-1	
15MR551	Design of Machine Elements	15MR561	Operation Research
15MR552	Energy Engineering	15MR562	Energy and Environment
15MR553	Marine Manufacturing Technology	15MR563	Management Information systems
15MR554	Steam Engineering	15MR564	Micro & Smart Technology

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2. Professional elective: Elective relevant to chosen specialization /branch
3. Open elective: Electives from other technical and /or emerging subject area

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**SCHEME OF TEACHING AND EXAMINATION 2015-2016**  
 VI Semester B.E. Marine Engineering

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/practical marks	IA Marks	Total Marks	
1	15MR61	Marine Electrical Technology (core)	04		03	80	20	100	4
2	15MR62	Marine Internal Combustion Engine-II (core)	04		03	80	20	100	4
3	15MR63	Marine Auxiliary Machines-II (core)	04		03	80	20	100	4
4	15MR64	Heat Transfer (core)	04		03	80	20	100	4
5	15MR65x	Professional Elective-2	03		03	80	20	100	3
6	15MR66x	Open Elective -2	03		03	80	20	100	3
7	15MRL67	Heat Transfer Lab		1I+2P	03	80	20	100	2
8	15MRL68	Marine Electrical Lab		1I+2P	03	80	20	100	2
Total			22	6	24	640	160	800	26

Professional Elective-2		Open Elective-2	
15MR651	Ship Fire Prevention and Control	15MR661	Automation and Industrial Robotics
15MR652	Mechanics of Composite Material	15MR662	Project Management
15MR653	Special Duty Vessels & Types of Operation	15MR663	Non Traditional Machining
15MR654	Control Engineering	15MR664	Management & Entrepreneurship

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2. Professional elective: Elective relevant to chosen specialization /branch
3. Open elective: Electives from other technical and /or emerging subject area

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 VII Semester B.E. Marine Engineering

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/practical marks	IA Marks	Total Marks	
1	15MR71	Marine Boilers (core)	04		03	80	20	100	4
2	15MR72	Mechanical Vibrations (core)	04		03	80	20	100	4
3	15MR73	Ship Operations and Management (core)	04		03	80	20	100	4
4	15MR74x	Professional Elective-3	03		03	80	20	100	3
5	15MR75x	Professional Elective-4	03		03	80	20	100	3
6	15MRL76	Vibration Lab		1I+2P	03	80	20	100	2
7	15MRL77	Simulation Lab		1I+2P	03	80	20	100	2
8	15MRP78	Project Phase-I + Seminar				--	100	100	2
Total			18	6	21	560	240	800	24

Professional Elective-3		Professional Elective-4	
15MR741	Stability of Ships	15MR751	IMO and Maritime Conventions
15MR742	Tribology	15MR752	Hydraulics and Pneumatics

15MR743	Ship Safety & Fire Protection.	15MR753	Shipping Trade
15MR744	Advanced Marine Technology	15MR754	Marine Machinery & System Design

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. Project Phase-I + seminar:Literature survey, problem identification, objectives and methodology. Submission of synopsis and seminar.

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 VIII Semester B.E. Marine Engineering

Sl no	Subject code	Title	Teaching Hours/week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/practical marks	IA Marks	Total Marks	
1	15MR81	Engine Room Management (Core)	04		03	80	20	100	4
2	15MR82	Control Engineering and automation (core)	04		03	80	20	100	4
3	15MR83x	Professional Elective-5	03		03	80	20	100	3
4	15MR84	Internship/Professional Practice	Industry oriented		03	50	50	100	2
5	15MRP85	Project Work Phase-II		06	03	100	100	200	6
6	15MRS86	Seminar		04	--	--	100	100	1
Total			11	10	15	390	310	700	20

Professional Elective-5	
15MR831	Transport and Logistics Management
15MR832	Ship Recycling
15MR833	Marine Engine Practice
15MR834	Marine Corrosion & Prevention.

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> and 7<sup>th</sup> semester vacation or 7<sup>th</sup> and 8<sup>th</sup> semester vacation period