

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI													
B.E. in Mechatronics Engineering													
Scheme of Teaching and Examinations 2022													
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)													
(Effective from the academic year 2023-24)													
III SEMESTER													
Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	BSC	BMT301	Mechanics of Solids and Fluids	TD: Mechatronics PSB: Mechatronics	2	2	0		03	50	50	100	3
2	IPCC	BMT302	Analog and Digital Electronics	TD: Mechatronics PSB: Mechatronics	3	0	2		03	50	50	100	4
3	IPCC	BMT303	Material Science and Manufacturing Technology	TD: Mechatronics PSB: Mechatronics	3	0	2		03	50	50	100	4
4	PCC	BMT304	Computer Organization and Architecture	TD: Mechatronics PSB: Mechatronics	3	0	0		03	50	50	100	3
5	PCCL	BMT305	Computer Aided Machine Drawing	TD: Mechatronics PSB: Mechatronics	0	0	2		03	50	50	100	1
6	ESC	BMT306x	ESC/ETC/PLC	TD: Mechatronics PSB: Mechatronics	3	0	0		03	50	50	100	3
7	UHV	BSCK307	<b>Social Connect and Responsibility</b>	Any Department	0	0	2		01	100	---	100	1
8	AEC/ SEC	BMT358x	Ability Enhancement Course/Skill Enhancement Course - III	TD: Mechatronics PSB: Mechatronics	If the course is a Theory				01	50	50	100	1
					1	0	0						
					If a course is a laboratory				02				
					0	0	2						
9	MC	BNSK359	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK359	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK359	Yoga	Yoga Teacher									
									<b>Total</b>	<b>550</b>	<b>350</b>	<b>900</b>	<b>20</b>
<b>PCC:</b> Professional Core Course, <b>PCCL:</b> Professional Core Course laboratory, <b>UHV:</b> Universal Human Value Course, <b>MC:</b> Mandatory Course (Non-credit), <b>AEC:</b> Ability Enhancement Course, <b>SEC:</b> Skill Enhancement Course, <b>L:</b> Lecture, <b>T:</b> Tutorial, <b>P:</b> Practical <b>S= SDA:</b> Skill Development Activity, <b>CIE:</b> Continuous Internal Evaluation, <b>SEE:</b>													

Semester End Evaluation. K : This letter in the course code indicates common to all the stream of engineering. ESC: Engineering Science Course, ETC: Emerging Technology Course, PLC: Programming Language Course			
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<b>Engineering Science Course (ESC/ETC/PLC)</b>			
BMT306A	Analog Communication Systems	BMT306C	Python Programming
BMT306B	Signals and Systems	BMT306D	Product Life Cycle Management
<b>Ability Enhancement Course – III</b>			
BMT358A	Programming in Python (002)	BMT358C	PCB Design Technology (002)
BMT358B	Trends in Digital Manufacturing	BMT358D	Robotics Ecosystem

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 (Effective from the academic year 2023-24)

IV SEMESTER													
Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	PCC	BMT401	Microcontrollers and applications	TD: Mechatronics PSB: Mechatronics	3	0	0		03	50	50	100	3
2	IPCC	BMT402	Electrical Drives and Control	TD: Mechatronics PSB: Mechatronics	3	0	2		03	50	50	100	4
3	IPCC	BMT403	Hydraulics and Pneumatics	TD: Mechatronics PSB: Mechatronics	4	0	0		03	50	50	100	4
4	PCCL	BMT404	Mechatronics Lab	TD: Mechatronics PSB: Mechatronics	0	0	2		03	50	50	100	1
5	ESC	BMT405x	ESC/ETC/PLC	TD: Mechatronics PSB: Mechatronics	3	0	0		03	50	50	100	3
6	AEC/ SEC	BMT456x	Ability Enhancement Course/Skill Enhancement Course- IV	TD: Mechatronics PSB: Mechatronics	If the course is Theory				01	50	50	100	1
					1	0	0						
					If the course is a lab				02				
0	0	2											
7	BSC	BBOK407	Biology For Engineers	TD / PSB: BT, CHE,	3	0	0		03	50	50	100	3
8	UHV	BUHK408	Universal human values course	Any Department	1	0	0		01	50	50	100	1
9	MC	BNSK459	National Service Scheme (NSS)	NSS coordinator	0	0	2		100	---	100	0	
		BPEK459	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK459	Yoga	Yoga Teacher									
<b>Total</b>									<b>500</b>	<b>400</b>	<b>900</b>	<b>20</b>	

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability Enhancement Course, **SEC:** Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **K :** This letter in the course code indicates common to all the stream of engineering.

**Ability Enhancement Course / Skill Enhancement Course - IV**

BMT456A	Mechanism Design and Animation (0-0-2)	BMT456C	CNC programming and simulation (0-0-2)
BMT456B	3-D Printing Technology (0-0-2)	BMT456D	IoT (0-0-2)

**Engineering Science Course (ESC/ETC/PLC)**

BMT405A	Robot Operating System	BMT405C	Renewable Sources of Energy
BMT405B	IIOT	BMT405D	Operations Research