

Global Academy of Technology

(An Autonomous Institution, affiliated to VTU, Belagavi, recognized by Karnataka and Approved by AICTE, New Delhi.)

B.E. in MECHANICAL ENGINEERING

Scheme of Teaching and Examinations (AY 2024-25)

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	BMATM24301	Transform calculus, Complex Analysis, Statistics and PDE	TD: Maths PSB: Maths	2	2	0		03	50	50	100	3
2	IPCC	BME24302	Manufacturing Technology	TD: ME PSB: ME	3	0	2		03	50	50	100	4
3	IPCC	BME24303	Computer-Aided Modelling	TD: ME PSB: ME	2	0	4		03	50	50	100	4
4	PCC	BME24304	Mechanics of Materials	TD: ME PSB: ME	2	2	0		03	50	50	100	3
5	PCCL	BMEL24305	Material Testing Laboratory	TD: ME PSB: ME	0	0	2		03	50	50	100	1
6	ETC/PLC	BME24306x	ETC/PLC	TD: ME PSB: ME	3	0	0		03	50	50	100	3
7	UHV	BSCK24307	Social Connect and Responsibility	Any Department	0	0	2		01	100	---	100	1
8	AEC/ SEC	BME24358x	Ability Enhancement Course/Skill Enhancement Course - III	TD & PSB: Concerned Department	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	BNSK24359	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK24359	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24359	Yoga	Yoga Teacher									
		BLAK24359	Liberal Arts	Prominent NGO									
Total									550	350	900	20	

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. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course.

Emerging Technology Course/Programming Language Course (ETC/PLC)			
BME24306A	Material Science and Smart Materials	BME24306C	Automobile Engines and Combustion
BME24306B	Foundations of EV & Hybrid Vehicles	BME24306D	Introduction to AI in Manufacturing
Ability Enhancement Course/Skill Enhancement Course – III			
BME24358A	Introduction to 3D Printing	BME24358C	Spreadsheet for Engineers
BME24358B	Energy Audit and Management	BME24358D	Tools in Scientific Computing



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IV 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	
1	BSC	BMATM24401	Transform calculus, Probability distributions and Sampling Techniques	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
2	IPCC	BME24402	Mechanical Measurements & Metrology	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
3	PCC	BME24403	Theory of Machines	TD: ME, PSB: ME	2	2	0		03	50	50	100	3
4	PCC	BME24404	Thermodynamics	TD: ME, PSB: ME	2	2	0		03	50	50	100	3
5	PCCL	BMEL24405	Machine Shop	TD: ME, PSB: ME	0	0	2		03	50	50	100	1
6	ETC/PLC	BME24406x	ETC/PLC	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
7	AEC/ SEC	BME24457x	Ability Enhancement Course/Skill Enhancement Course- IV	TD and PSB: Concerned department	If the course is Theory				01	50	50	100	1
					1	0	0						
					If the course is a lab				02				
					0	0	2						
8	BSC	BBOK24407	Biology For Engineers	TD / PSB: BT, CHE,	1	0	0		01	50	50	100	1
9	UHV	BUHK24408	Universal human values course	Any Department	1	0	0		01	50	50	100	1
10	MC	BNSK24459	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK24459	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24459	Yoga	Yoga Teacher									
		BLAK24459	Liberal Arts	Prominent NGO									
Total										550	450	1000	20

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.

Emerging Technology Course/Programming Language Course (ETC/PLC)			
BME24406A	Composite Materials	BME24406C	Integrated Mechatronics and Autotronics
BME24406B	EV Battery Technology & Thermal Management	BME24406D	Introduction to ML & its Applications in Mechanical Engineering
Ability Enhancement Course / Skill Enhancement Course – IV			
BME24457A	Geometric Dimensioning & Tolerancing	BME24457C	Smart Manufacturing and Industry 4.0
BME24457B	Digital Marketing	BME24457D	Basics of Financial Management for Engineers



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V 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	
1	HSMC	BME24501	Engineering Economics and Management	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
2	IPCC	BME24502	Fluid Machinery	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
3	PCC	BME24503	Machine Design	TD: ME, PSB: ME	2	2	0		03	50	50	100	3
4	PCCL	BMEL24504	CNC Programming and Simulation Laboratory	TD: ME, PSB: ME	0	0	2		03	50	50	100	1
5	PEC	BME24505x	Professional Elective Course I	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
6	AEC/ SEC	BME24556x	Ability Enhancement Course/Skill Enhancement Course- V	TD: ME, PSB: ME	If the course is Theory				01	50	50	100	1
					1	0	0						
					If the course is Lab				02				
					0	0	2						
7	PROJ	BMEP24507	Mini Project	TD: ME, PSB: ME	0	0	4		03	100	-	100	2
8	AEC	BRMK24557	Research Methodology and IPR	Any Department	2	2	0		03	50	50	100	3
9	MC	BESK24508	Environmental Studies	Civil	1	0	0		01	100	--	100	0
10	MC	BNSK24559	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	--	100	0
		BPEK24559	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24559	Yoga	Yoga Teacher									
		BLAK24559	Liberal Arts	Prominent NGO									
Total									650	350	1000	20	

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. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course.

Professional Elective Course I

BME24505A	Non-Traditional Machining	BME24505C	Design for Manufacturing
BME24505B	Green Energy Technology	BME24505D	Statistical Quality Control

Ability Enhancement Course / Skill Enhancement Course – V

BME24556A	Introduction to MATLAB	BME24556C	Data Analytics
BME24556B	Alternate Fuels	BME24556D	Introduction to Biomechanics – Implementation Process in Lab



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VI 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	
1	IPCC	BME24601	Mechanical Vibrations	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
2	PCC	BME24602	Heat Transfer	TD: ME, PSB: ME	2	2	0		03	50	50	100	3
3	PCC	BME24603	Project and Operations Management	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
4	PEC	BME24604x	Professional Elective Course II	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
5	OEC	BME24605x	Open Elective Course I	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
6	PROJ	BMEP24606	Project Phase I	TD: ME, PSB: ME	0	0	4		03	100	--	100	2
7	PCCL	BMEL24607	Heat Transfer Laboratory	TD: ME, PSB: ME	0	0	2		03	50	50	100	1
8	AEC/SEC	BME24657x	Ability Enhancement Course/Skill Enhancement Course- VI	TD: ME, PSB: ME	If the course is offered as a Theory				01	50	50	100	1
					1	0	0						
					If course is offered as a practical				02				
					0	0	2						
9	IKS	BIKS24608	Indian Knowledge System	Any Dept.	1	0	0		01	100	---	100	0
10	NCMC	BNSK24659	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK24659	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24659	Yoga	Yoga Teacher									
		BLAK24659	Liberal Arts	Prominent NGO									
Total										650	350	1000	20

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. **ESC:** Engineering Science Course, **ETC:** Emerging Technology Course, **PLC:** Programming Language Course.

Professional Elective Course II			
BME24604A	Computer-Integrated Manufacturing	BME24604C	Design of Transmission Elements
BME24604B	Building Air Conditioning and Ventilation	BME24604D	Operations Research
Open Elective Course I			
BME24605A	Introduction to Additive Manufacturing	BME24605C	Total Quality Management
BME24605B	Green Energy	BME24605D	Introduction to Industrial Robotics
Ability Enhancement Course / Skill Enhancement Course-VI			
BME24657A	CATIA for Mechanical Engineers	BME24657C	Sustainable Product Design
BME24657B	Introduction to Condition Monitoring	BME24657D	Augmented and Virtual Reality in Design



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VII SEMESTER (Swappable VII and VIII 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	IPCC	BME24701	Finite Element Methods	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
2	IPCC	BME24702	Fluid Drives & Control	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
3	PCC	BME24703	Automation & Robotics	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
4	PEC	BME24704x	Professional Elective Course III	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
5	OEC	BME24705x	Open Elective Course II	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
6	PROJ	BMEP24706	Major Project Phase-II	TD: ME, PSB: ME	0	0	14		03	100	100	200	7
Total									350	350	700	24	

Professional Elective Course III

BME24704A	Additive Manufacturing	BME24704C	Digital Twin Technology
BME24704B	Thermal Management of Electronic Equipment	BME24704D	Total Quality Management

Open Elective Course II

BME24705A	Supply Chain Management	BME24705C	Introduction to Operations Research
BME24705B	Project and Operations Management	BME24705D	Modern Mobility

PCC: Professional Core Course, **PCCL:** Professional Core Course laboratory, **PEC:** Professional Elective Course, **OEC:** Open Elective Course **PR:** Project Work, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **TD-** Teaching Department, **PSB:** Paper Setting department, **OEC:** Open Elective Course, **PEC:** Professional Elective Course. **PROJ:** Project work

Note: VII and VIII semesters of IV years of the program

- (1) Institutions can swap the VII and VIII Semester Schemes of Teaching and Examinations to accommodate research internships/ industry internships after the VI semester.
- (2) Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether the VII or VIII semesters is completed during the beginning of the IV year or the later part of IV years of the program.



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VIII SEMESTER (Swappable VII and VIII 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	PEC	BME24801x	Professional Elective (Online Courses) IV	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
2	PEC	BME24802x	Professional Elective (Online Courses) V	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
3	INT	BME24803	Internship (Industry/Research) (14 - 20 weeks)	TD: ME, PSB: ME	0	0	12		03	100	100	200	10
Total									200	200	400	16	

Professional Elective Course (Online courses) IV

BME24801A	Quality Design & Control (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_mg24/preview	BME24801C	Machinery Fault Diagnosis and Signal Processing (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc22_me60/preview
BME24801B	Product Design and Manufacturing (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_me66/preview	BME24801D	Materials Design for Electronic, Electromechanical and Optical Functions https://onlinecourses.nptel.ac.in/noc25_mm63/preview

Professional Elective Course (Online courses) V

BME24802A	Noise Control in Mechanical Systems https://onlinecourses.nptel.ac.in/noc25_me55/preview	BME24802C	Strategies for Sustainable Design (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_de07/preview
BME24802B	Industrial Safety Engineering (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc20_mg43/preview	BME24802D	Business Planning & Project Management (Available in NPTEL) https://onlinecourses.swayam2.ac.in/cec21_ge06/preview

L: Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **TD-** Teaching Department, **PSB:** Paper Setting department, **OEC:** Open Elective Course, **PEC:** Professional Elective Course. **PROJ:** Project work, **INT:** Industry Internship / Research Internship / Rural Internship

Note: VII and VIII semesters of IV years of the program

Swapping Facility

- Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate **research internships/ industry internships/Rural Internship** after the VI semester.

- Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the program.

Elucidation:

At the beginning of IV years of the program i.e., after VI semester, VII semester classwork and VIII semester **Research Internship /Industrial Internship / Rural Internship** shall be permitted to be operated simultaneously by the University so that students have ample opportunity for an internship. In other words, a good percentage of the class shall attend VII semester classwork, and a similar percentage of others shall attend to Research Internship or Industrial Internship or Rural Internship.

Research/Industrial /Rural Internship shall be carried out at an Industry, NGO, MSME, Innovation centre, Incubation centre, Start-up, centre of Excellence (CoE), Study Centre established in the parent institute and /or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internships for 14 to 20 weeks. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent University examination after satisfying the internship requirements.

Research internship: A research internship is intended to offer the flavour of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

Rural Internship: Rural development internship is an initiative of Unnat Bharat Abhiyan Cell, RGIT in association with AICTE to involve students of all departments studying in different academic years for exploring various opportunities in techno-social fields, to connect and work with Rural India for their upliftment.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (**within or outside the state or abroad**), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide. **University shall not bear any cost involved in carrying out the internship by students.** However, students can receive any financial assistance extended by the organization.

Professional Elective /Open Elective Course: These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students on the Institute web portal.



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VI SEMESTER(A)

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	IPCC	BME24601	Mechanical Vibrations	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
2	PCC	BME24602	Heat Transfer	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
3	PCC	BME24603	Project and Operations Management	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
4	PEC	BME24604x	Professional Elective Course II	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
5	OEC	BME24605x	Open Elective Course I	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
6	PROJ	BMEP24606	Project Phase I	TD: ME, PSB: ME	0	0	4		03	100	--	100	2
7	PCCL	BMEL24607	Heat Transfer Laboratory	TD: ME, PSB: ME	0	0	2		03	50	50	100	1
8	AEC/SDC	BME24657x	Ability Enhancement Course/Skill Development Course VI	TD: ME, PSB: ME	If the course is offered as a Theory				01	50	50	100	1
					1	0	0						
					If course is offered as a practical				02				
					0	0	2						
9	IKS	BIKS24608	Indian Knowledge System	Any Department	1	0	0		01	100	--	100	0
10	MC	BNSK24659	National Service Scheme (NSS)	NSS coordinator	0	0	2	--	---	100	---	100	0
		BPEK24659	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK24659	Yoga	Yoga Teacher									
		BLAK24659	Liberal Arts	Prominent NGO									
Total									650	350	1000	20	

Professional Elective Course II			
BME24604A	Computer-Integrated Manufacturing	BME24604C	Design of Transmission Elements
BME24604B	Building Air Conditioning and Ventilation	BME24604D	Operations Research
Open Elective Course I			
BME24605A	Introduction to Additive Manufacturing	BME24605C	Total Quality Management
BME24605B	Green Energy	BME24605D	Introduction to Industrial Robotics
Ability Enhancement Course / Skill Enhancement Course-VI			
BME24657A	CATIA for Mechanical Engineers	BME24657C	Sustainable Product Design
BME24657B	Introduction to Condition Monitoring	BME24657D	Augmented and Virtual Reality in Design



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VII and VIII semesters for the candidate those who seek an internship with project work (A)

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	IPCC	BME24701	Finite Element Methods To be completed in 5 th /6 th semester	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
2	IPCC	BME24702	Fluid Drives & Control To be completed in 5 th /6 th semester	TD: ME, PSB: ME	3	0	2		03	50	50	100	4
3	PCC	BME24703	Automation & Robotics To be completed in the 6 th semester	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
4	PEC	BME24704x	Professional Elective Course/Online III	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
5	OEC	BME24705x	Open Elective Courses/Online II	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
1	PEC	BME24801x	Professional Elective (MOOC Courses) IV	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
2	PEC	BME24802x	Professional Elective (MOOC Courses) V	TD: ME, PSB: ME	3	0	0		03	50	50	100	3
3	INT	BME24803	Internship (Industry/Research) (02 semesters)	TD: ME, PSB: ME	0	0	12		03	100	100	200	10
4	PROJ	BMEP24804	Major Project II - outcome of training	TD: ME, PSB: ME	0	0	14		03	100	100	200	7
										550	550	1100	40

Professional Elective Course III

BME24704A	Additive Manufacturing	BME24704C	Digital Twin Technology
BME24704B	Thermal Management of Electronic Equipment	BME24704D	Total Quality Management

Open Elective Course II

BME24705A	Supply Chain Management	BME24705C	Introduction to Operations Research
BME24705B	Project and Operations Management	BME24705D	Modern Mobility

Professional Elective Course (MOOC courses) IV			
BME24801A	Quality Design & Control (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_mg24/preview	BME24801C	Machinery Fault Diagnosis and Signal Processing (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc22_me60/preview
BME24801B	Product Design and Manufacturing (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_me66/preview	BME24801D	Materials Design for Electronic, Electromechanical and Optical Functions https://onlinecourses.nptel.ac.in/noc25_mm63/preview
Professional Elective Course (MOOC courses) V			
BME24802A	Noise Control in Mechanical Systems https://onlinecourses.nptel.ac.in/noc25_me55/preview	BME24802C	Strategies for Sustainable Design (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc21_de07/preview
BME24802B	Industrial Safety Engineering (Available in NPTEL) https://onlinecourses.nptel.ac.in/noc20_mg43/preview	BME24802D	Business Planning & Project Management (Available in NPTEL) https://onlinecourses.swayam2.ac.in/cec21_ge06/preview