

Sharnbasva University, Kalaburagi												
Scheme of Teaching and Examination 2022-23												
[As Per NEP, Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Scheme]												
(Effective from the academic year 2022-23)												
Programme: B. Tech in Mechanical Engineering												
III SEMESTER												
Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BSC	22MATM31	Mathematics for MES-III	Mathematics	2	1	0	3	50	50	100	03
2	PCC	22ME32	Engineering Thermodynamics	ME	3	1	0	4	50	50	100	04
3	PCC	22ME33	Manufacturing Process	ME	3	0	0	3	50	50	100	03
4	PCC	22ME34	Engineering Materials & Applications	ME	3	0	0	3	50	50	100	03
5	PCC	22ME35	Computer Aided Machine Drawing	ME	1	0	4	3	50	50	100	03
6	PCC	22MEL36	Material Testing Laboratory	ME	0	0	2	3	50	50	100	01
7	PCC	22MEL37	Foundry & Forging Laboratory	ME	0	0	2	3	50	50	100	01
8	PCC	22MEL38	Workshop Practice Laboratory -I	ME	0	0	2	3	50	50	100	01
9	PW	22PRJ39	Project-III	ME	0	0	2	3	50	50	100	01
10	HSS	22HSM310	Social Connect Responsibility	Humanities	1	0	0	3	50	50	100	01

11	AEC	22AECME311X	Ability Enhancement Course-III	ME	1	0	0	3	50	50	100	01
<b>Total</b>					<b>12</b>	<b>5</b>	<b>10</b>	<b>34</b>	<b>550</b>	<b>550</b>	<b>1100</b>	<b>22</b>
Note: BS-Basic Science, PCC- Programme Core Course, PW-Project Work, AEC- Ability Enhancement Courses-Humanity and Social Science, NCMC-Non Credit Mandatory Course												

Project (PRJ): A Batch of 4 students (Same Branch or Different Branches with a Guide, may undertake one project.												
<b>Ability Enhancement Course-III</b>												
<b>Course code under 22AEC311X</b>				<b>Course Title</b>								
22AECME311A				Basics of Spread Sheets								
22AECME311B				Introduction to Gauges & Measurements								
<b>Courses prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs</b>												
12	NCMC	22MATDIP31	Additional Mathematics– I	Mathematics	3	1	-	3	00	100	100	00
<p>1) Non-Credit Mandatory Courses (NCMC) Additional Mathematics-I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of B. Tech. programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the university examination. In case any student fails to register for the said course/fails to secure the minimum 50% of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the students have to fulfill the requirements during subsequent semester/s to appear for SEE.</p> <p>2) These courses shall not be mandatory for vertical progression, but completion of the courses shall be mandatory for the award of degree.</p>												
<b>Courses prescribed to lateral entry B.Sc. Degree holders admitted to III semester of Engineering programs</b>												
Lateral entry students from B.Sc. stream, shall clear the noncredit courses Computer Aided Engineering Drawing, Elements of Civil Engineering of First Year Engineering Programme. These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory For the award of degree.												

**AICTE Activity Points to be earned by students admitted to B.Tech. Programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines):**

Over and above the academic grades, every regular student admitted to the 4 years degree Programme and every student entering 4 years degree Programme through lateral entry, shall earn 100 and 75 activity points respectively for the award of degree through AICTE activity point Programme. Students transferred from other universities to fifth semester are required to earn 50 activity points from the year of entry to Sharnbasva University. The-activity points earned shall be reflected on the students eighth semester grade card.

The activities can be spread over the years, any time during the semester weekends holidays, as per the liking and convenience of the student from the year of entry to the Programme. However, minimum hours requirement should be fulfilled. Activity points (non-credit) have no effect on SGPA/CGPA and shall not be considered for vertical progression.

In case students fail to earn the prescribed activity points, eighth semester grade card shall be issued only after earning the required activity points. student shall be admitted for the award of the degree only after the release of the eighth semester grade card.

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Scheme of Teaching and Examination 2022-23												
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(Effective from the academic year 2022-23)												
Programme: B. Tech in Mechanical Engineering												
IV SEMESTER												
Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BSC	22MATM41	Mathematics for MES-IV	Mathematics	3	0	0	3	50	50	100	03
2	PCC	22ME42	Fundamentals of Fluid Mechanics	ME	2	1	0	3	50	50	100	03
3	PCC	22ME43	Applied thermodynamics	ME	2	1	0	3	50	50	100	03
4	PCC	22ME44	Instrumentation and Metrology	ME	2	1	0	3	50	50	100	03
5	PCC	22ME45	Mechanics of Materials	ME	2	1	0	3	50	50	100	03
6	PCC	22MEL46	Fluid Mechanics Laboratory	ME	0	0	2	3	50	50	100	01
7	PCC	22MEL47	Instrumentation and Measurement Laboratory	ME	0	0	2	3	50	50	100	01
8	PCC	22MEL48	Foundry and Forging Laboratory	ME	0	0	2	3	50	50	100	01
9	PW	22PRJ49	Project-IV	ME	0	0	2	3	50	50	100	01
10	HSS	22UHV410	Universal Human Values	Humanities	3	0	0	2	50	50	100	03



**AICTE Activity Points to be earned by students admitted to B.Tech. Programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines):**

Over and above the academic grades, every regular student admitted to the 4 years Degree Programme and every student entering 4 years Degree Programme through lateral entry, shall earn 100 and 75 Activity points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other universities to fifth semester are required to earn 50 activity points from the year of entry to Sharnbasva University. The-Activity Points earned shall be reflected on the students eighth semester Grade card.

The activities can be spread over the years, any time during the semester weekends holidays, as per the liking and convenience of the student from the year of entry to the Programme. However, minimum hours requirement should be fulfilled. Activity Points (noncredit) have no effect on SGPA/CGPA and shall not be considered for vertical progression.

In case students fail to earn the prescribed activity points, Eighth semesterGradeCardshallbeissuedonlyafterearningtherequiredactivitypoints.

Student shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

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Scheme of Teaching and Examination2022-23												
[As per NEP, Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Scheme]												
(Effectivefromtheacademicyear2022-23)												
Programme: B. Tech: Mechanical Engineering												
V SEMESTER												
Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	HSS	22HSM51	Management and Entrepreneurship Development	Humanities	2	1	0	3	50	50	100	03
2	PCC	22ME52	Theory of Machines	ME	3	1	0	3	50	50	100	04
3	PCC	22ME53	Turbomachines	ME	2	1	0	3	50	50	100	03
4	PEC	22ME54X	Professional Elective Course-I	ME	2	1	0	3	50	50	100	03
5	OEC	22XX55X	Open Elective Course-I	ME	3	1	0	3	50	50	100	04
6	PCC	22MEL56	Design Laboratory	ME	0	0	2	3	50	50	100	01
7	PCC	22MEL57	Fluid machines Laboratory	ME	0	0	2	3	50	50	100	01
8	PEC	22MEL58X	Professional Elective Course-I Laboratory	ME	0	0	2	3	50	50	100	01

9	PW	22PRJ59	Project-V	ME	0	0	2	3	50	50	100	01
10	AEC	22AECME510X	Ability Enhancement Course-V	ME	0	0	2	3	50	50	100	01
<b>Total</b>					<b>12</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>500</b>	<b>500</b>	<b>1000</b>	<b>22</b>
Note: PCC- Programme Core Course, PEC- Professional Elective Course, PW-Project Work, HSS-Humanity and Social Science, OEC- Open Elective Course, AEC- Ability Enhancement Course- Universal Human Values.												
Project (PRJ): A batch of 4 to 5 students (Same branch or different branches) with a guide, may undertake one project (1 hour of theory/tutorial or two hours of practice /activities.												
<b>Professional Elective Course-I</b>												
<b>Course code under 22ME54X</b>		<b>Course Title</b>		<b>Course code under 22MEL58X</b>		<b>Course Title</b>						
22ME541		Internal combustion engines		22MEL581		Internal combustion engines laboratory						
22ME542		Alternative Fuels and Hybrid System		22MEL582		Fuel testing laboratory						
<b>Open Elective Course-I</b>												
<b>Course code under 22XX55X</b>		<b>Course Title</b>										
22ME551		Supply Chain management										
22ME552		Micro-Electro Mechanical System										
<b>Ability Enhancement Course-V</b>												
<b>Course code under</b>		<b>Course Title</b>										
22AECME510A		Introduction to Sand Moulding										
22AECME510B		Introduction to Electric Vehicles										
<b>AICTE Activity Points:</b> In case students fail to earn the prescribed activity points, eighth semester Grade Card shall be issued only after earning the Required activity points. Student shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.												



**Sharnbasva University, Kalaburagi**  
**Scheme of Teaching and Examination 2022-23**  
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**(Effective from the academic year 2022-23)**

**Programme: B. Tech Mechanical Engineering**

**VI SEMESTER**

Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
01	PCC	22ME61	Heat and Mass Transfer	ME	2	1	0	3	50	50	100	03
02	PCC	22ME62	Design of Machine Elements	ME	2	1	0	3	50	50	100	03
03	PEC	22ME63X	Professional Elective Course-II	ME	2	1	0	3	50	50	100	03
04	PEC	22ME64X	Professional Elective Course-III	ME	2	1	0	3	50	50	100	03
05	OEC	22ME65X	Open Elective Course-II	ME	3	1	0	3	50	50	100	04
06	PCC	22MEL66	Heat and Mass Transfer Laboratory	ME	0	0	2	3	50	50	100	01
07	PEC	22MEL67X	Professional Elective Course-II Lab	ME	0	0	2	3	50	50	100	01
08	PEC	22MEL68X	Professional Elective Course-III Lab	ME	0	0	2	3	50	50	100	01
09	PW	22PRJ69	Project-VI	ME	0	0	2	3	50	50	100	01



**AICTE Activity Points:** In case students fail to earn the prescribed activity points, eighth semester Grade Card shall be issued only after earning the Required activity points. Student shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

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Programme: B. Tech: Mechanical Engineering												
VII SEMESTER												
Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/Drawing	Duration Hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PCC	22ME71	Hydraulics and Pneumatics	ME	2	1		3	50	50	100	03
2	PCC	22ME72	Finite Element Methods	ME	2	1		3	50	50	100	03
3	PCC	22ME73	Control Engineering	ME	2	1		3	50	50	100	03
4	PEC	22ME74X	Professional Elective Course-IV	ME	2	1		3	50	50	100	03
5	OEC	22ME75X	Open Elective Course-III	ME	3	1		3	50	50	100	04
6	PCC	22MEL76	Hydraulics and Pneumatics Laboratory	ME			2	3	50	50	100	01
7	PCC	22MEL77	Computer Aided Modeling and Analysis Laboratory	ME			2	3	50	50	100	01
8	PEC	22MEL78X	Professional Elective Course-IV Laboratory	ME			2	3	50	50	100	01
9	PW	22PRJ79	Project-VII	ME			2	3	50	50	100	01
10	HSS	22HSM710	Industrial Psychology and Organizational Behavior	Humanities	1			3	50	50	100	01

<b>Total</b>				<b>12</b>	<b>5</b>	<b>08</b>	<b>30</b>	<b>500</b>	<b>500</b>	<b>1000</b>	<b>21</b>
Note: PCC-Professional Core Course, PEC-Professional Elective Course, OEC-Open Elective Course, PW-Project Work, HSS-Humanity and Social Science, AEC-Ability Enhancement Course.											
Project (PRJ): A batch of 4 to 5 students (Same branch or different branches) with a guide, may undertake one project (1 hour of theory/tutorial or two hours of practice /activities.											
<b>Professional Elective Course-IV</b>											
<b>Course code under 22ME74X</b>		<b>Course Title</b>		<b>Course code under 22MEL78X</b>		<b>Course Title</b>					
22ME741		Automobile Engineering		22MEL781							
22ME742		Mechatronics		22MEL782		Mechatronics Laboratory					
<b>Open Elective Course-III</b>											
<b>Course code under 22ME75X</b>		<b>Course Title</b>									
22ME751		Operation Management									
22ME752		Operations Research									
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**(Effective from the academic year 2022-23)**

**Programme: B. Tech: Mechanical Engineering**

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**VIII SEMESTER**

Sl. No.	Course Code		Course Title	Teaching Department	Teaching Hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practica I/Drawi	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	Project	22PRJ81	Research Project / Field Project - VIII				16	3	50	50	100	08
2	Internship	22MEI82	Internship				12	3	50	50	100	04
3	Seminar	22MES83	Technical Seminar				4	3	50	50	100	02
Total							32	09	150	150	300	14

Note:  
PCC-Professional Core Course-Professional Elective Course, OEC-Open Elective Course, PW-Project Work, HSS-Humanity and Social Science, AEC- Ability Enhancement Course. Internship-To be carried out during the vacation/s of VI and VII semesters or VII and VIII semesters

Project (PRJ): A batch of 4 to 5 students (Same branch or different branches) with a guide, may undertake one project (1 hour of theory/tutorial or two hours of practice /activities).

**Note: Project-8 Manufacturable and marketable project / Research project/Field Project.**