

**Department of Mechanical  
Engineering  
School of Engineering and  
Technology**

**Criteria 1**

**Sub Criteria 1.3.3**

**Percentage of students undertaking field  
projects/research projects/internships**

**Academic Year**

**2020-2021**

  
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ITM University  
Gwalior (M.P.)



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“ CELEBRATING DREAMS ”

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## Index

<b>S.No</b>	<b>Component</b>	<b>Page No</b>
1.	Scheme of UG	<b>4-8</b>
2.	Syllabus	<b>9-23</b>
3.	Research Projects of UG	<b>24-26</b>
4.	Industrial trainings in UG	<b>27-28</b>

  
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**Total Number of Research Projects in UG**

Research Projects	Program	Total Number of students Involved in research projects
	B.Tech-ME	18

**Total Number of Industrial Trainings in UG**

Industrial Trainings	Program	Total Number of students Involved in industrial trainings
	B.Tech-ME	12

  
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**EXAMINATION SCHEME**

**Program Name: B. Tech. Batch 2020-24**

**Branch: Mechanical Engineering (Specialization in Manufacturing Technology)**

**SEMESTER III**

S. No.	Subject Code	Subject Name	Maximum Marks Allotted							Credits Allotted (Subject Wise)			Total Credits	Remarks	
			Theory Slot			Practical Slot				Total Marks	Period Per Week				
			End Sem. Exam	Mid Sem. Exam (Two Tests' Average)	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva	L		T	P			
1	MEL0305	Basic Thermodynamics	40	30	30	40	30	30	200	2	1	2	4		
2	MEL 0308	Measurement and Metrology	40	30	30	40	30	30	200	2	1	2	4		
3	MEL 0310	Mechanics of Solids	40	30	30	40	30	30	200	2	1	2	4		
4	MEL 0341	Manufacturing Technology –II	40	30	30	40	30	30	200	2	1	2	4		
5	MAL0308	Engineering Mathematics	40	30	30	-	-	-	100	3	1	0	4		
6	MED0301	Evaluation of Industrial Training-I	-	-	-	40	30	30	100	0	0	4	2		
<b>Total marks ---1000</b>									<b>Total Credits</b>			<b>22</b>			

7	Swayam MOOC Course(Optional)	Solar Energy Conversion	2 Credits
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**EXAMINATION SCHEME**

**Program Name: B. Tech. Batch 2020-24**

**Branch: Mechanical Engineering (Specialization in Manufacturing Technology)**  
**SEMESTER V**

S. No.	Subject Code	Subject Name	Maximum Marks Allotted							Credits Allotted (Subject Wise)			Total Credits	Remarks	
			Theory Slot			Practical Slot				Total Marks	Period Per Week				
			End Sem. Exam	Mid Sem. Exam (Two Tests' Average)	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva	L		T	P			
1	MEL0518	Dynamics of Machines	40	30	30	40	30	30	200	2	1	2	4		
2	MEL0515	Machine Design-I	40	30	30	40	30	30	200	2	1	2	4		
3	MEL0516	IC Engines	40	30	30	40	30	30	200	2	1	2	4		
4	MEL0521	Fluid Machinery	40	30	30	40	30	30	200	2	1	2	4		
5	MEL0522	Advanced Manufacturing	40	30	30	---	-----	-----	100	2	1	0	3		
6	MEL0523	Industrial Automation & Control	40	30	30	---	-----	-----	100	2	1	0	3		
7	MED0502	Evaluation of Industrial Training-2	-	-	-	40	30	30	100	0	0	4	2		
<b>Total marks-1100</b>									<b>Total Credits</b>			<b>24</b>			

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**EXAMINATION SCHEME**

**Program Name: B. Tech. Batch 2020-24**

**Branch: Mechanical Engineering (Specialization in Manufacturing Technology)**

**SEMESTER VI**

S. No.	Subject Code	Subject Name	Maximum Marks Allotted							Credits Allotted (Subject Wise)			Total Credits	Remarks	
			Theory Slot			Practical Slot				Total Marks	Period Per Week				
			End Sem. Exam	Mid Sem. Exam (Two Tests' Average)	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva	L		T	P			
1	MEL0617	Machine Design-II	40	30	30	40	30	30	200	3	1	2	5		
2	MEL0619	Heat & Mass Transfer	40	30	30	40	30	30	200	3	1	2	5		
3	MEL0620	Power Plant Engineering	40	30	30	-	-	-	100	3	1	0	4		
4	MEL0626	Operations Research	40	30	30	-	-	-	100	3	1	0	4		
5	MEL0627	Additive Manufacturing	40	30	30	40	30	30	200	2	1	2	4		
6	MED0603	Minor Project	-	-	-	40	30	30	100	0	0	4	2		
<b>Total marks=900</b>										<b>Total Credits</b>			<b>24</b>		

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**EXAMINATION SCHEME**

**Program Name: B. Tech.**

**Batch 2020-24**

**Branch: Mechanical Engineering (Specialization in Manufacturing Technology)**

**SEMESTER VII**

S. No.	Subject Code	Subject Name	Maximum Marks Allotted							Credits Allotted (Subject Wise)			Total Credits	Remarks	
			Theory Slot			Practical Slot				Total Marks	Period Per Week				
			End Sem. Exam	Mid Sem. Exam (Two Tests' Average)	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva	L		T	P			
1	MEL0722	Computer Aided Design	40	30	30	40	30	30	200	3	1	2	5		
2	MEL0723	Refrigeration and Air Conditioning	40	30	30	40	30	30	200	3	1	2	5		
3	MEL0727	Total Quality Management	40	30	30	-----	-----	-----	100	2	1	0	3		
4	Listed	Elective 1	40	30	30	-----	-----	-----	100	3	1	0	4		
5	Listed	Elective 2	40	30	30	-----	-----	-----	100	3	1	0	4		
6	MEC0701	Training Report	-----	-----	-----	40	30	30	100	0	0	4	2		
7	MED0702	Major Project	-----	-----	-----	40	30	30	100	0	0	4	2		
<b>Total marks ---900</b>									<b>Total Credits</b>			<b>25</b>			

**ELECTIVE – 1:**

- (1) MEE0717- Theory of Production process
- (2) MEE0702- Unconventional manufacturing processes
- (3) MEE0703- Product Design and Development Dynamics
- (4) MEE0704- Reliability Engineering

**ELECTIVE – 2:**

- (1) MEE0705- Non Conventional Energy Resources
- (2) MEE0706- Optimization Methods
- (3) MEE0707- Introduction to Computational Fluid Dynamics
- (4) MEE0708- Mechanical System design

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**Program Name: B. Tech.**

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**SEMESTER VIII**

S. No.	Subject Code	Subject Name	Maximum Marks Allotted							Credits Allotted (Subject Wise)			Total Credits	Remarks	
			Theory Slot			Practical Slot				Total Marks	Period Per Week				
			End Sem. Exam	Mid Sem. Exam (Two Tests' Average)	Class Participation	End Sem. Exam	Progressive Evaluation	Internal Viva	L		T	P			
1	MEL0825	Automobile Engineering	40	30	30	40	30	30	200	3	1	2	5		
2	MEL0827	CNC & Flexible Manufacturing Systems	40	30	30	40	30	30	200	3	1	2	5		
3	Listed	Elective 3	40	30	30	----	-----	-----	100	3	1	0	4		
4	Listed	Elective 4	40	30	30	----	-----	-----	100	3	1	0	4		
5	<b>MED0803</b>	<b>Major Project</b>	----	-----	-----	120	90	90	300	0	0	16	8		
<b>Total marks ---900</b>									<b>Total Credits</b>			<b>26</b>			

**ELECTIVE-3:**

- (1)MEE 809- Vibration and Noise- Measurement and Control
- (2)MEE 0810- Foundry Engineering
- (3)MEE 0811- Advanced Welding Technology
- (4) MEE 0812- Tribology

**ELECTIVE-4:**

- (1)MEE 0813- Computer Integrated Manufacturing
- (2)MEE 0814-Non Destructive testing
- (3)MEE 0815- Design of Machine Tools
- (4) MEE 0816- Finite Element Method

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## Syllabus

<b>Title of the Course</b>	Evaluation of Industrial Training-1
<b>Course Code</b>	MED0301[P]

### Part A

Year	2nd	Semester	3rd	Credits	L	T	P	C	
					0	0	2	2	
<b>Course Type</b>	Lab only								
<b>Course Category</b>	Projects and Internship								
<b>Pre-Requisite/s</b>	subject knowledge of first and second semester .			<b>Co-Requisite/s</b>					
<b>Course Outcomes &amp; Bloom's Level</b>	<p><b>CO1-</b> Understand themselves in relation to their community and develop among themselves sense of social and civic and responsibility. <b>(BL2-Understand)</b></p> <p><b>CO2-</b> Identify the needs and problem of the community and involve them in problem solving. <b>(BL2-Understand)</b></p> <p><b>CO3-</b> Utilize their knowledge in finding practical solution to individual and community problem. <b>(BL3-Apply)</b></p> <p><b>CO4-</b> Develop the confidence require for group living and sharing of responsibilities of acquire leadership qualities and democratic attitudes. <b>(BL4-Analyze)</b></p> <p><b>CO5-</b> Develop the capacity to meet emergencies and natural disasters and practice national integration and social harmony <b>(BL5-Evaluate)</b></p>								
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG4(Quality education) SDG9(Industry Innovation and Infrastructure)					

### Part B

Modules	Contents	Pedagogy	Hours
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Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Industrial training has its own importance in a career of a student who is pursuing a professional degree. It is considered as a part of college curriculum. The objective of an industrial training is to provide us an insight regarding internal working of companies. We understand that theoretical knowledge is not enough for a successful professional career. With an aim to go beyond academics, industrial visit provides students a practical perspective of the workplace. Industrial trainings provide an opportunity to learn practically through interaction, working methods and employment practices.	Field work	BL3-Apply	40 hrs
Module-II	It gives students an exposure to current work practices as opposed to possibly theoretical knowledge being taught at college. Industrial visits provide an excellent opportunity to interact with industries and know more about industrial environment. Industrial trainings are arranged by TAP cell with an objective of providing us an opportunity to explore different sectors like IT, Manufacturing services, finance and marketing. Industrial visit helps to combine theoretical knowledge with practical knowledge. Industrial realities are opened to the students through industrial visits/trainings.	Field work	BL4-Analyze	40 hrs

Part D (Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	50				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	0	40	20	60	

  
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Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

<b>COs</b>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

  
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## Syllabus


<b>Title of the Course</b>	Evaluation of Industrial Training-2
<b>Course Code</b>	MED0502[P]

### Part A

Year	3rd	Semester	5th	Credits	L	T	P	C
					0	0	2	2
<b>Course Type</b>	Lab only							
<b>Course Category</b>	Projects and Internship							
<b>Pre-Requisite/s</b>	subject knowledge of Mechanical Engineering			<b>Co-Requisite/s</b>				
<b>Course Outcomes &amp; Bloom's Level</b>	<p><b>CO1-</b> Understand themselves in relation to their community and develop among themselves sense of social and civic and responsibility. <b>(BL2-Understand)</b></p> <p><b>CO2-</b> Identify the needs and problem of the community and involve them in problem solving. <b>(BL2-Understand)</b></p> <p><b>CO3-</b> Utilize their knowledge in finding practical solution to individual and community problem. <b>(BL3-Apply)</b></p> <p><b>CO4-</b> Develop the confidence require for group living and sharing of responsibilities of acquire leadership qualities and democratic attitudes. <b>(BL4-Analyze)</b></p> <p><b>CO5-</b> Develop the capacity to meet emergencies and natural disasters and practice national integration and social harmony <b>(BL5-Evaluate)</b></p>							
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG9(Industry Innovation and Infrastructure)				

### Part B

Modules	Contents	Pedagogy	Hours
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Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Industrial training has its own importance in a career of a student who is pursuing a professional degree. It is considered as a part of college curriculum. The objective of an industrial training is to provide us an insight regarding internal working of companies. We understand that theoretical knowledge is not enough for a successful professional career. With an aim to go beyond academics, industrial visit provides students a practical perspective of the workplace. Industrial trainings provide an opportunity to learn practically through interaction, working methods and employment practices.	Field work	BL4-Analyze	40 hrs
Module-II	It gives students an exposure to current work practices as opposed to possibly theoretical knowledge being taught at college. Industrial visits provide an excellent opportunity to interact with industries and know more about industrial environment. Industrial trainings are arranged by TAP cell with an objective of providing us an opportunity to explore different sectors like IT, Manufacturing services, finance and marketing. Industrial visit helps to combine theoretical knowledge with practical knowledge. Industrial realities are opened to the students through industrial visits/trainings.	Field work	BL5-Evaluate	40 hrs

Part D (Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	50				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	0	40	20	60	

  
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Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

  
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## Syllabus

<b>Title of the Course</b>	Minor Project
<b>Course Code</b>	MED0603[P]

### Part A

Year	3rd	Semester	6th	Credits	L	T	P	C	
					0	0	2	2	
<b>Course Type</b>	Project								
<b>Course Category</b>	Projects and Internship								
<b>Pre-Requisite/s</b>	Knowledge of Mechanical engineering and interdisciplinary subjects.			<b>Co-Requisite/s</b>					
<b>Course Outcomes &amp; Bloom's Level</b>	<b>CO1-</b> To enhance writing skills and knowledge.( <b>BL2-Understand</b> ) <b>CO2-</b> To increase their mental ability.( <b>BL3-Apply</b> ) <b>CO3-</b> To inculcate the ability to express innovative opinion and thoughts( <b>BL4-Analyze</b> ) <b>CO4-</b> To have Dissertation works as skills development in students.( <b>BL5-Evaluate</b> )								
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG9(Industry Innovation and Infrastructure)					

### Part B

Modules	Contents	Pedagogy	Hours
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### Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Identification of a problem and formulation of a topic of project/thesis	PBL	BL3-Apply	15 hrs
Module-III	Dissertation and Viva-voci	PBL	BL5-Evaluate	20 hrs

  
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Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	50				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	50	40	20	60	

Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

  
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## Syllabus

<b>Title of the Course</b>	Training Report
<b>Course Code</b>	MEC0701{P}

### Part A

Year	4th	Semester	7th	Credits	L	T	P	C
					0	0	2	2
<b>Course Type</b>	Lab only							
<b>Course Category</b>	Projects and Internship							
<b>Pre-Requisite/s</b>	subject knowledge of Mechanical Engineering			<b>Co-Requisite/s</b>				
<b>Course Outcomes &amp; Bloom's Level</b>	<p><b>CO1-</b> Understand themselves in relation to their community and develop among themselves sense of social and civic and responsibility. <b>(BL2-Understand)</b></p> <p><b>CO2-</b> Identify the needs and problem of the community and involve them in problem solving. <b>(BL2-Understand)</b></p> <p><b>CO3-</b> Utilize their knowledge in finding practical solution to individual and community problem. <b>(BL3-Apply)</b></p> <p><b>CO4-</b> Develop the confidence require for group living and sharing of responsibilities of acquire leader ship qualities and democratic attitudes. <b>(BL4-Analyze)</b></p> <p><b>CO5-</b> Develop the capacity to meet emergencies and natural disasters and practice national integration and social harmony <b>(BL5-Evaluate)</b></p>							
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG9(Industry Innovation and Infrastructure)				

### Part B

Modules	Contents	Pedagogy	Hours
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Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Industrial training has its own importance in a career of a student who is pursuing a professional degree. It is considered as a part of college curriculum. The objective of an industrial training is to provide us an insight regarding internal working of companies. We understand that theoretical knowledge is not enough for a successful professional career. With an aim to go beyond academics, industrial visit provides students a practical perspective of the workplace. Industrial trainings provide an opportunity to learn practically through interaction, working methods and employment practices.	Field work	BL4-Analyze	40 hrs
Module-II	It gives students an exposure to current work practices as opposed to possibly theoretical knowledge being taught at college. Industrial visits provide an excellent opportunity to interact with industries and know more about industrial environment. Industrial trainings are arranged by TAP cell with an objective of providing us an opportunity to explore different sectors like IT, Manufacturing services, finance and marketing. Industrial visit helps to combine theoretical knowledge with practical knowledge. Industrial realities are opened to the students through industrial visits/trainings.	Field work	BL5-Evaluate	40 hrs

Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	50				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	0	40	20	60	

  
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Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

<b>COs</b>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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## Syllabus

<b>Title of the Course</b>	Major Project
<b>Course Code</b>	MED0702[P]

### Part A

Year	4th	Semester	7th	Credits	L	T	P	C	
					0	0	2	2	
<b>Course Type</b>	Lab only								
<b>Course Category</b>	Projects and Internship								
<b>Pre-Requisite/s</b>	Knowledge of Mechanical engineering and interdisciplinary subjects.			<b>Co-Requisite/s</b>					
<b>Course Outcomes &amp; Bloom's Level</b>	<b>CO1-</b> To enhance writing skills and knowledge.( <b>BL2-Understand</b> ) <b>CO2-</b> To increase their mental ability.( <b>BL3-Apply</b> ) <b>CO3-</b> To inculcate the ability to express innovative opinion and thoughts.( <b>BL4-Analyze</b> ) <b>CO4-</b> To have Dissertation works as skills development in students. ( <b>BL5-Evaluate</b> )								
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG9(Industry Innovation and Infrastructure)					

### Part B

Modules	Contents	Pedagogy	Hours
Module-I			

### Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Identification of a problem and formulation of a topic of project/thesis	PBL	BL3-Apply	48 hrs
Module-III	Dissertation and Viva-voci	PBL	BL5-Evaluate	

  
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Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	50				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
100	50	40	20	60	

Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

  
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## Syllabus

<b>Title of the Course</b>	Major Project
<b>Course Code</b>	MED0803[P]

### Part A

Year	4th	Semester	8th	Credits	L	T	P	C
					0	0	8	8
<b>Course Type</b>	Lab only							
<b>Course Category</b>	Projects and Internship							
<b>Pre-Requisite/s</b>	Knowledge of Mechanical engineering and interdisciplinary subjects.			<b>Co-Requisite/s</b>				
<b>Course Outcomes &amp; Bloom's Level</b>	<b>CO1-</b> To enhance writing skills and knowledge.( <b>BL2-Understand</b> ) <b>CO2-</b> To increase their mental ability.( <b>BL3-Apply</b> ) <b>CO3-</b> To inculcate the ability to express innovative opinion and thoughts.( <b>BL4-Analyze</b> ) <b>CO4-</b> To have Dissertation works as skills development in students.( <b>BL5-Evaluate</b> )							
<b>Course Elements</b>	Skill Development ✓ Entrepreneurship ✓ Employability ✓ Professional Ethics ✗ Gender ✗ Human Values ✗ Environment ✗		<b>SDG (Goals)</b>	SDG9(Industry Innovation and Infrastructure)				

### Part B

Modules	Contents	Pedagogy	Hours
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### Part C

Modules	Title	Indicative-ABCA/PBL/ Experiments/Field work/ Internships	Bloom's Level	Hours
Module-I	Identification of a problem and formulation of a topic of project/thesis	PBL	BL3-Apply	15 hrs
Module-II	To have field work and data collection through a chosen methodology	PBL	BL4-Analyze	15 hrs
Module-III	Dissertation and Viva-voci	PBL	BL5-Evaluate	20 hrs

  
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Part D(Marks Distribution)

Theory					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
	150				
Practical					
Total Marks	Minimum Passing Marks	External Evaluation	Min. External Evaluation	Internal Evaluation	Min. Internal Evaluation
300	0	120	60	180	

Part E

<b>Books</b>	
<b>Articles</b>	
<b>References Books</b>	
<b>MOOC Courses</b>	
<b>Videos</b>	

Course Articulation Matrix

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2	-	1	-	-	-	-	-	-	-	2	2	2
CO2	1	-	2	-	2	-	-	-	-	-	-	-	1	2	1
CO3	1	2	-	2	1	-	-	-	-	-	-	-	2	2	2
CO4	1	1	-	2	-	-	-	-	1	-	-	-	2	2	1
CO5	-	-	-	-	1	-	-	-	-	1	-	-	2	1	1
CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

  
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### Details of UG research projects

Name of the School: School of Engineering and Technology

Name of the Course and Branch: B.Tech-ME (Batch 2017-21)

Session: 2020-21

Total No. of Students enrolled: 18

S. No.	Specialization	Name of the student	Roll no.	Title of the project	Duration	Name of the Guide
1.	B.Tech-ME	Aditya Upadhyay	BETN1ME17002	Design and fabrication of fatigue testing machine	06 months	Dr. Rajendra Singh Rajput
		Kishlay Kumar	BETN1ME17007			
		Kritish Kumar Sharma	BETN1ME17008			
		Mayank Sharma	BETN1ME17009			
		Ravi Kushwah	BETN1ME17012			
		Sanchay Kumar	BETN1ME17013			
2.		Saurabh Singh	BETN1ME17014	Project Rover	06 months	Mr. Jai Kumar
		Pankaj	BETN3ME18D05			
		Happy Verma	BETN5ME19T01			
3		Shreyash Bara	BETN1ME17015	PARABOLIC TROUGH WATER HEATER	06 months	Mr. Trilok Chauhan
		Chinmay Gupta	BETN1ME17005			
		Kalpit Gurung	BETN1ME17006			
4.		Sparsh Agrawal	BETN1ME17016	Design and fabrication of Pedal power hackshaw Machine	06 months	Mr. Trilok Chauhan
		Suraj Mahato	BETN1ME17018			
		Sarthak Raj	BBETN1PT17007			
		Aslam Khan	BETN3ME18D01			
		Ayush Dixit	BETN3ME18D02			
		Bashir Anshari	BETN3ME18D04			

Head  
Department of Mechanical Engineering

  
Dr. Omveer Singh  
REGISTRAR  
ITM University  
Gwalior (M.P.)





UNIVERSITY  
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"CELEBRATING DREAMS"

DESIGN AND FABRICATION OF  
PEDAL POWER HACKSHAW  
MACHINE

A MAJOR PROJECT

*A dissertation submitted in partial fulfillment for the award of the  
degree of*

BACHELOR OF  
TECHNOLOGY IN  
MECHANICAL ENGINEERING



UNIVERSITY  
GWALIOR • MP • INDIA

*Submitted by*

ASLAM KHAN (BETN3ME18D01)

AYUSH DIXIT (BETN3ME18D02)

BASHIR ANSARI (BETN3ME18D04)

SURAJ MAHTO (BETN1ME17018)

SPARSH AGRWAL (BETN1ME17016)

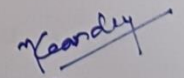
*Under the guidance of*

MR. TRILOK CHAUHAN

ASSISTANT PROFESSOR

Mechanical Engineering Department

ITM, University, Gwalior (M.P.), INDIA

  
Dean  
School of Engg. & Tecn  
ITM University  
Gwalior

Total

  
Dr. Omveer Singh  
REGISTRAR  
ITM University  
Gwalior (M.P.)



"CELEBRATING DREAMS"

**Design and Fabrication of Fatigue Testing Machine**

**A MAJOR PROJECT**

*Submitted in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY  
IN  
MECHANICAL ENGG.**



*Submitted by*

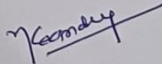
**KISHLAY KUMAR(BETN1ME17007)  
ADITYA UPADHAYAY(BETN1ME17002)  
CHINMAY GUPTA ( BETN1ME17005)  
KALPIT GURUNG (BETN1ME17006)  
SANCHAY KUMAR (BETN1ME170013)  
KRATISH KUMAR SHARMA (BETN1ME17008)  
MAYANK SHARMA (BETN1ME17009)  
RAVI KUSHWAHA (BETN1ME17012)**


**Under the Guidance of**

**Mr. R S RAJPUT**

**Assistance Professor**

**Mechanical Engineering Department  
ITM, University, Gwalior (M.P.), INDIA**

  
Dean  
School of Engg. & Techn  
ITM University  
Gwalior

  
**Dr. Omveer Singh  
REGISTRAR  
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Gwalior (M.P.)**

## Number of Industrial Trainings in UG

Industrial Trainings	Program	Total Number of students Involved in research projects
		B.Tech-ME



CIN NUMBER : U85300DL2018PTC334604 WEBSITE : WWW.MEDTOUREASY.COM  
PHONE : +91 8700219382 EMAIL : CARE@MEDTOUREASY.COM

**DATE** : October 26, 2020

**sukhpreet singh cheema**  
**ITM University**  
**Subject - Internship/Live Project**

Dear sukhpreet singh cheema

With reference to your application, we would like to congratulate you for being selected as a Project Management Trainee for the Internship/Live Project with MedTourEasy, Based at New Delhi. Your training is scheduled to start from 27th October, 2020 effective for a period of 4 weeks. All of us at MedTourEasy are excited that you will be joining our team!

As such your internship will include training/orientation and will be focused primarily on learning and developing new skills and gaining a deeper understanding of concepts through hands-on application of the knowledge you attain in class.

Upon completion of the program, you will be receiving a Badge of Completion. The best performers will also be considered for a PPO. Upon completion the candidates can also request a Letter of Recommendation and an appreciation letter from the company. The project detail will be shared with you on or before commencement of training.

You would be reporting online.

**Congratulations** again and we look forward to work with you.

Yours Sincerely  
Human Resources Team  
**MedTourEasy**

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M 130-131, SECOND FLOOR,  
CONNAUGHT CIRCLE, CONNAUGHT  
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BUILDING NO. 84, GROUND FLOOR,  
CYBER HUB, DLF CYBER CITY,  
GURUGRAM, HARYANA 122002

MEDTOUREASY, ABL WORKSPACES,  
B-6, BLOCK B, SECTOR 4, NOIDA,  
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GM ENGINEERING SERVICES

03-12-2020

### CERTIFICATE

This is to certify that Mr. Happy Verma (Roll No. BETN5ME19T01), a student of B.Tech. Mechanical Engineering, VII semester, ITM University Gwalior, (M.P.) has successfully completed internship with us from 01-11-2020 to 01-12-2020 in Design department. During his internship he has worked on "Designing and modelling of robotic systems" and other minor projects.

He was found to be sincere, hardworking and a keen learner  
We wish his success in life.

For GM Engineering.

**Divyansh Agarwal**  
Director and founder

GM ENGINEERING SERVICES

OPPOSITE BASANT TUBE CO. NAVAPUR  
ROAD, MEDC, TARAPUR, BOHAR, TAL & DIST. PALGHAR (M.S.)  
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Head  
Department of Mechanical Engineering

  
Dr. Omveer Singh  
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