

**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

2019-2020


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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	33

Total Number of Industrial Trainings in UG

Industrial Trainings	Program	Total Number of students Involved in industrial training
	B.Tech-ME	23

Total Number of Industrial visits in UG

Industrial Visits	Program	Total Number of students Involved in industrial visits
	B.Tech-ME	37


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EXAMINATION SCHEME

Program Name: B. Tech. Batch 2019-23

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	3	1	2	5		
2	MEL 0308	Measurement and Metrology	40	30	30	40	30	30	200	3	1	2	5		
3	MEL 0310	Mechanics of Solids	40	30	30	40	30	30	200	3	1	2	5		
4	MEL 0341	Manufacturing Technology –II	40	30	30	40	30	30	200	3	1	2	5		
5	MAL0308	Engineering Mathematics	40	30	30	-	-	-	100	3	1	0	4		
6	MED0301	Evaluation of Industrial Training-1	-	-	-	40	30	30	100	0	0	4	2		
Total marks ---1000									Total Credits			26			

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

Program Name: B. Tech. Batch 2019-23

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	3	1	2	5		
3	MEL0516	IC Engines	40	30	30	40	30	30	200	3	1	2	5		
4	MEL0521	Fluid Machinery	40	30	30	40	30	30	200	2	1	2	4		
5	MEL0522	Advanced Manufacturing	40	30	30	---	-----	-----	100	3	1	0	4		
6	MEL0523	Industrial Automation & Control	40	30	30	---	-----	-----	100	3	1	0	4		
7	MED0502	Evaluation of Industrial Training-2	-	-	-	40	30	30	100	0	0	4	2		
Total marks-1100										Total Credits			28		

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EXAMINATION SCHEME
Program Name: B. Tech. Batch 2019-23
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			
Total marks=900												Total Credits			24	

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EXAMINATION SCHEME

Program Name: B. Tech.

Batch 2019-23

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		
Total marks ---900									Total Credits			25			

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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EXAMINATION SCHEME
Program Name: B. Tech. **Batch 2019--23**
Branch: Mechanical Engineering (Specialization in Manufacturing Technology)
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	MED0803	Major Project	----	-----	-----	120	90	90	300	0	0	16	8			
Total marks ---900									Total Credits			26				


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

Title of the Course	Evaluation of Industrial Training-1
Course Code	MED0301[P]

Part A

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

Part B


Modules	Contents	Pedagogy	Hours
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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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"CELEBRATING DREAMS"

Part E

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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


Title of the Course	Evaluation of Industrial Training-2
Course Code	MED0502[P]

Part A

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

Part B

Modules	Contents	Pedagogy	Hours
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"CELEBRATING DREAMS"

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

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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

Title of the Course	Minor Project
Course Code	MED0603[P]


Part A

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

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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

Title of the Course	Training Report
Course Code	MEC0701[P]

Part A

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

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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

Title of the Course	Major Project
Course Code	MED0702[P]

Part A

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

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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

Title of the Course	Major Project
Course Code	MED0803[P]

Part A

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

Books	
Articles	
References Books	
MOOC Courses	
Videos	

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 2016-20)

Session: 2019-2020

Total No. of Students enrolled: 33

S. No.	Specialization	Name of the student	Roll no.	Title of the project	Duration	Name of the Guide
1.	B.Tech-ME	Abhinav kumar	BETN1ME16001	Electricity generation by PV cells, phase change material & thermoelectric generator	06 months	Mr Nadeem Faisal
		Parth Pandey	BETN1ME16025			
		Suryansh Tomar	BETN1ME16031			
2.	B.Tech-ME	Abhishek Rathore	BETN1ME16003	Wear behaviour of jute glass reinforced epoxy composites	06 months	Mr Nadeem Faisal
		Aditya Singh Chauhan	BETN1ME16004			
		Praveen Kumar Pandey	BETN1ME16026			
		Nilesh Patidar	BETN1ME16023			
		Sushil Behra	BETN1ME16032			
		Divesh Singh	BETN1ME16011			
3	B.Tech-ME	Akash Kumar Deepak	BETN1ME16005	Road power generation by sliding mechanism	06 months	Mr. Arun Kushwah
		Aman Kumar	BETN1ME16006			
		Gaurav Kumar Pandey	BETN1ME16014			
		Shubam Shresth	BETN1ME16001			
4.	B.Tech-ME	Anmol Dubey	BETN1ME16007	Gearless transmission system/ elbow mechanism transmission system	06 months	Mr Trilok Chauhan
		Durga Prasad	BETN1ME16012			
		Mohammad Talha Rizwan	BETN1ME16022			
5.	B.Tech-ME	Ashraf Khan	BETN1ME16008	Thermal behaviour of zirconia filled with epoxy composites	06 months	Mr. Sateesh Kumar
		Hrishi Raj Patkar	BETN1ME16017			
		Jadid Ahmed	BETN1ME16019			
6.	B.Tech-ME	Ayush singh	BETN1ME16009	Performance and failure analysis of a shell and tube	06 months	Mr.Jai Kumar

				heat exchanger		
7.		Chiranjib Acharjee	BETN1ME16010	Mechanical wear behaviour of orange peel reinforced epoxy composition	06 months	Mr. Sateesh Kuumar
		Himansu Nauni	BETN1ME16016			
		Kaduduri Eshwar Babu	BETN1ME16020			
8.		Syed Ekramul Hoque	BETN1ME16033	Foot step power generation mechanism	06 months	Mr Trilok Chauhan
		Usman Gani	BETN1ME16034			
9.		Rahul Sharma	BETN1ME16027	Performance of savories wind turbine on seasonal conditions	06 months	Mr. Nadeem Faisal
		Sachin Dubey	BETN1ME16028			
		Gaurav Sharma	BETN1ME16037			
10.		Vivek Upadhyay	BETN1ME16035	Transformer heat reduction	06 months	Mr Trilok Chauhan
11.		Vivekanand Sharma	BETN1ME16036	Performance and failure analysis of a shell and tube heat exchanger	06 months	Mr. Arun Kushwah
12.		S.M Imtiazul Islam	BETN1ME16038	Design of non-invasive bilevel positive airway pressure (bipap)	06 months	Mr. Nadeem Faisal
		Piyal Chakraborty	BETN1ME16039			

Head 
Department of Mechanical Engineering


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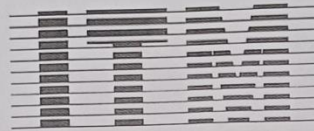
"CELEBRATING DREAMS"

**DESIGN OF NON-INVASIVE BILEVEL
POSITIVE AIRWAY PRESSURE (BiPAP)**

A MAJOR PROJECT REPORT

*Submitted in partial fulfilment of the requirements for the award
Of*

BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING



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"CELEBRATING DREAMS"

JULY 2020

Submitted by.

Piyal Chakraborty (BETN1ME16039)

*Under the Guidance
Of*

Mr NADEEM FAISAL
(Assistant Professor)

DEPARTMENT OF MECHANICAL ENGINEERING
ITM UNIVERSITY, GWALIOR, MADHYA PRADESH, INDIA
474001

Nadeem
Dean
School of Engg. & Tech,
ITM University
Gwalior


Dr. Omveer Singh
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"CELEBRATING DREAMS"

**PERFORMANCE AND FAILURE ANALYSIS OF
SHELL AND TUBE HEAT EXCHANGER**

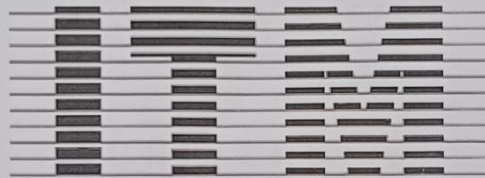
A MAJOR PROJECT

Submitted in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING DEPARTMENT



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Submitted by

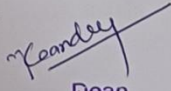
**AYUSH SINGH
BETN1ME16009**

Under the guidance of

**Mr. Arun Singh Kushwah
Assistant Professor
Mechanical Engineering Department**

**ITM UNIVERSITY GWALIOR
MP, INDIA**

2016-2020


Dean
School of Engg. & Tecn
ITM University
Gwalior


**Dr. Omveer Singh
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Total Number of Industrial Trainings in UG

Industrial Trainings	Program	Total Number of students Involved in research projects
	B.Tech-ME	23




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Industrial Visits	
Industry	Date
Industrial Visit- Aerial Delivery Research and Development Establishment (ADRDE), AGRA	24 Sep 2019

हवाइवातरण अनुसंधान एव
विकास संस्थापन
भारत सरकार, रक्षा मंत्रालय,
रक्षा अनुसंधान एवं विकास संगठन
पत्र पेट्टी संख्या 51, स्टेशन रोड, आगरा कैंट
दूरभाष (0562)-2258261, फॅक्स +91 5622251677

समी पत्रादि निदेशक के पते से
भेजे जाने चाहिए

आई.एस.ओ. 9001:2015 प्रमाणित
ISO 9001:2015 CERTIFIED

**Aerial Delivery Research &
Development Establishment**
Government of India, Ministry of Defence,
Defence Research & Development Organisation
Post Box No. 51, Station Road, Agra Cantt-282001
Tele.# (0562)-2258261, Fax # +91 562 2251677
e-mail : director@adrde.drdo.in

ALL CORRESPONDENCE SHOULD BE
ADDRESSED TO DIRECTOR

No. ADRDE/QMS/AG/HRD/424 Date: 24 Sep 2019

To,
The Vice Chancellor
ITM University Gwalior
AH-43, Turari, Bypass,
Jhansi road Gwalior
M.P.-475001

Sub: One day Industrial visit of Students of B. Tech(Mechanical Engg.) to ADRDE Agra.

आपके द्वारा प्रस्तावित विजिट इस संस्थापन में दिनांक 30 सितम्बर के लिए स्वीकृत की जाती है। इस विजिट के लिये श्री गुरु प्रसाद वैज्ञानिक 'डी' फोन नं० 0562-2258334 एवं श्री अटल बिहारी तकनीकी अधिकारी 'ए' फोन नं० 0562-2258252 को मनोनीत किया गया है। यह पत्र आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित है।

प्रगति अग्रवाल
(प्रगति अग्रवाल)
तक० अधि०-ए'
कृते निदेशक




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The Aerial Delivery Research and Development Establishment is a laboratory of the Indian Defence Research and Development Organisation. It is located in Agra, Uttar Pradesh in India.

Following faculty members and students visited the institute-

- (a) Mr. Arun Kushwah and Mr. Gaurav Verma, Assistant Professor.
- (b) Industrial visit of 37 students of final year and pre-final year.

The department of mechanical engineering organized of students of final year and prefinal year on 24 September 2019.

The students visited the campus, laboratories, and their other establishment and learned about the design and development of aerodynamic and aerostat system including of remote-controlled parachute.



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Name of student	Roll No.
Md Raza	BETN1CS15060
Abhinav Singh	BETN1ME15001
Abhishek Thakur	BETN1ME15002
Abhishek Shakya	BETN1ME15003
Akash Verma	BETN1ME15004
Akash Yadav	BETN1ME15005
Ankit Shrivastava	BETN1ME15006
Ankit Kumar Choudhary	BETN1ME15007
Ankit Lal	BETN1ME15008
Arka Das	BETN1ME15009
Chetan Anand Agrawal	BETN1ME15011
Deepesh Dhakar	BETN1ME15012
Gulam Ahmad	BETN1ME15013
Hipendra Singh	BETN1ME15014
Jeetesh Wadhawani	BETN1ME15015
Karan Singh Tomar	BETN1ME15016
Karreddula Bhaskara Amarthya	BETN1ME15017
Kishore Debnath	BETN1ME15018
Kumar Saurav Singh	BETN1ME15019
manish Shukla	BETN1ME15021
Neeraj Agrawal	BETN1CS16058
Abhinav Kumar	BETN1ME16001
Abhishek Rathore	BETN1ME16003
Aditya Singh Chauhan	BETN1ME16004
Akash Kumar Deepak	BETN1ME16005
Aman Kumar	BETN1ME16006
Anmol Dubey	BETN1ME16007
Ashraf Khan	BETN1ME16008
Ayush Singh	BETN1ME16009



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Chiranjib Acharjee	BETN1ME16010
Divesh Singh	BETN1ME16011
Durgaprasad B Meda	BETN1ME16012
Eruguralla Sumanth	BETN1ME16013
Gaurav Kumar Pandey	BETN1ME16014
Harshit Katiyar	BETN1ME16015
Himanshu Nauni	BETN1ME16016
Hrishiraj Patker	BETN1ME16017

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