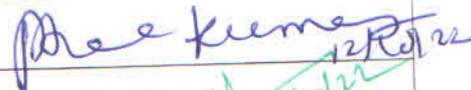
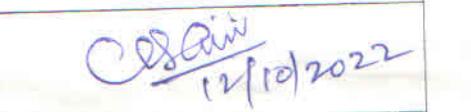
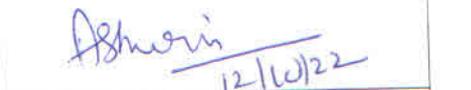
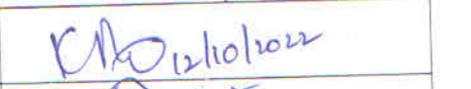
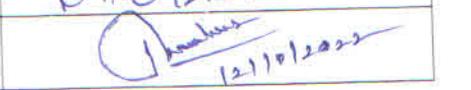


## DEPARTMENT OF MECHANICAL ENGINEERING

### BOARD OF STUDIES (BoS) MEETING

The following members of Board of Studies (BoS) were present in the meeting of Board of Studies of Department of Mechanical Engineering held on 12<sup>th</sup> October 2022.

S No	POSITION	BOS MEMBERS	SIGNATURE
1.	Chairman	Dr. P. Ravi Kumar Professor & HoD, ME, CMRCET	 12/10/22
2.	Member	Dr.MT Naik, University nominee, Professor of ME, JNTU Hyderabad	 12/10/22
3.	Member	Dr AVSSKS Gupta Institute Nominee, Professor of ME, JNTU Hyderabad	 12/10/2022
4.	Member	Mr.S.Ashok Vardhan , Nominee from Industry, Sr. Dy. General Manager, Tool Room & tool Engineering, Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad.	
5.	Member	Dr A.Krishnaiah, Institute Nominee, Professor of ME, Osmania University, Hyderabad	 12/10/2022
6.	Member	Mr.S.Ashwin, Distinguished Alumni of CMRCET and Director, Gautami Pipes Private Limited, Nacharam City, Hyderabad.	 12/10/22
7.	Member	Dr.K.Srinivasa Rao, Professor of ME & Controller of examinations, CMRCET.	 12/10/2022
8.	Member	Mr.Santosh V Kulkarni, Associate Professor of ME, CMRCET	 12/10/2022

Date: 12-10-2022

Hyderabad.

  
(Dr.P.Ravi Kumar)

Professor & Head, ME

HEAD

Department of Mechanical Engineering  
CMR College of Engg. & Technology  
Kandlakoya, Medchal, Hyderabad-501401.

## DEPARTMENT OF MECHANICAL ENGINEERING

CMRCET/ME/2022-23/ BOS/1

Date: 12-10-2022

### MINUTES OF MEETING OF BOARD OF STUDIES OF MECHANICAL ENGINEERING (ME) DEPARTMENT CONDUCTED ON 12<sup>th</sup> October 2022 AT 2.00 PM

#### AGENDA:

1. Finalization of I Semester to VIII Semester R22 B.Tech ME Course Structure
2. Finalization of Syllabus for service subjects offered by Mechanical Engineering Department.
3. Finalization of R22 B.Tech ME Syllabus from I Semester to IV Semester and Finalization of syllabus for service subjects offered by Mechanical Engineering Department
4. Finalization of R22 Regulation B Tech Open Electives Courses
5. Finalization of Substitute subjects for R 18 Regulation students readmitted in R 22 Regulation

#### PROCEEDINGS:

1. The Board of Studies of ME Department held its meeting on **21<sup>st</sup> September 2019** and the following members were present:

S No	Name	Position	Designation
1.	Dr.P.Ravi Kumar	Chairman	HoD, ME, CMRCET
2.	Dr M.T.Naik	Member	University nominee, Professor of ME, JNTU Hyderabad
3.	Dr AVSSKS Gupta	Member	Institute Nominee, Professor of ME, JNTU Hyderabad.
4.	Dr.A.Krishnaiah	Member	Institute Nominee, Professor of ME, OU Hyderabad.
5.	Mr.S.Ashok Vardhan	Member	Nominee from Industry, Sr. Dy. General Manager, Tool Room & tool Engineering, Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad.
6.	Mr.S.Ashwin	Member	Distinguished Alumni of CMRCET and Director, Director, Gautami Pipes Private Limited, Hyderabad.
7.	Dr.K.Srinivasa Rao	Member	Professor of ME, CMRCET
8.	Mr.Santosh V Kulkarni	Member	Associate Professor of ME, CMRCET

#### ITEM 1: Finalization of I Semester to VIII Semester R22 B.Tech ME Course Structure

##### Discussion:

Chairman welcomed the members for the meeting and proposed Curriculum of B.Tech (Mech.Engg.) from I Semester to VIII Semester of the R22 Course Structure for the batches from academic year 2022-23. He emphasized the need for finalization of curriculum for the UG program in Mechanical Engineering. He presented the curriculum followed by JNTUH and other prestigious institutions.

**Suggestions:**

- To include latest courses in the curriculum.
- Dr.A.Krishnaiah, Institute Nominee suggested that advanced courses related to industry may be included in the curriculum

**Resolution:**

BoS Members approved Item-I and Course structure is appended as Annexure-I

**ITEM-II :** Finalization of Syllabus for service subjects offered by Mechanical Engineering Department.

**Suggestions:** BoS members suggested to adopt latest technologies and implement computer aided courses.

**Resolution:**

BoS Members approved Item-III and Course structure for service subjects offered by Mechanical Engineering Department is appended as Annexure-III

**ITEM – III :** Finalization of R22 B.Tech ME Syllabus from I Semester to IV Semester and Finalization of syllabus for service subjects offered by Mechanical Engineering Department.

**Suggestions:**

- To include latest editions of textbooks in all courses of the curriculum.
- Dr.AVSSS Gupta, Institute Nominee suggested that course outcomes of all the theory courses should be limited to 5 uniformly.
- The Board has decided to adapt the course structure and syllabus in respect of courses of service subjects as per the decision of Boards of studies of respective subjects.

**Resolution:**

BoS Members approved Item-III and Syllabus of first four semesters and service subjects is appended as Annexure-III

**ITEM-IV :** Finalization of R22 Regulation B Tech Open Electives Courses

**Discussion:** The above item has been reviewed by the committee members.

**Suggestions:**

BoS members suggested to include courses which increases the scope of Mechanical Engineering without any prerequisite.

**Resolution:** BoS Members approved Item-IV and Course structure is appended as Annexure-III

The detailed syllabus of above mentioned courses is placed as Annexure-IV to these minutes. The board recommended the above curriculum to the concerned Boards of studies and College Academic Council for necessary approval.

**ITEM - V:** Review and finalization of substitute and equivalent courses/subjects for readmitted student from R18 to R22 regulations

**Discussion:** The above item has been reviewed by the committee members

**Suggestions:**

BoS members suggested the appropriate substitute and equivalence courses for the re-admitted students from R18 to R22 in I, II, III and IV semesters.

**Resolution:** The BoS Members approved the substitute and equivalent courses/subjects for readmitted student from R18 to R22 in I, II, III and IV semesters.

1. A student re- admitted in II semester has to register for Additional course(s) to earn the credits as per R22 Regulations.

Credits of I semester in R18	Credits from II to VIII semester in R22	Additional Credits Required	Total credits
18.5	140	1.5	160

**Additional Course(s) of the semester as per R22 Regulations:**

S.No	Course Name	Credits
1	English for Skill Enhancement (A400101)	2

**Substitute Course(s) for repeated courses of the semester in R22 Regulations:**

S. No	Repeated course(s) of R22 with code (credits) if any studied by the student in R18 Regulation	Recommended Substitute course (S) with code (credits) in place of Repeated courses
1	Engineering Graphics (A403202) (2.5 Credits)	Engineering Workshop (A403503) (2.5 credits)

2. A student re-admitted from R18 to R22 in III semester has to register for Additional course(s) to earn the credits as per R22 Regulations

Credits upto II semester in R18	Credits from III to VIII semester in R22	Additional Credits Required	Total credits
38	120	2	160

**Additional Course(s) of the semester as per R22 Regulations:**

S.No	Course name	Credits
1	Engineering materials (A403301)	2

**Substitute Course(s) for repeated courses of the semester in R22 Regulations:**

S.No	Repeated course(s) of R22 with code (credits) if any studied by the student in R18 Regulation	Recommended Substitute course(S) with code (credits) in place of Repeated courses
1	NIL	NIL

3. A student re-admitted from R18 to R22 in IV semester has to register for Additional course(s) to earn the credits as per R22 Regulations

Credits upto III semester in R18	Credits from III to VIII semester in R22	Additional Credits Required	Total credits
58.5	100	1.5	160

**Additional Course(s) of the semester as per R22 Regulations:**

S.No	Course name	Credits
1	Fluid Mechanics & Hydraulic machines (A401203)	3

**Substitute Course(s) for repeated subjects of the semester in R22 Regulations:**

S.No	Repeated Course (s) of R22 with code (credits) if any studied by the student in R18 Regulation	Recommended Substitute Course(S) with code (credits) in place of Repeated Courses
1	Social Innovation Practice (A400507) – 1 Credit	Fluid Mechanics & Hydraulic machines Lab (A401504)- 1 Credit

**OTHER ITEMS NOT IN AGENDA:**

Paper setters list and paper valutors list for end semester examinations is examined by BoS Members and approved. It is placed as annexure-V to these minutes.

The chairman thanked all the members for sparing their valuable time and for their valuable contribution in framing the curriculum. There being no further points, the meeting came to an end at 5.00 pm.

(Dr.P.Ravi Kumar)  
HoD, ME

## ANNEXURE-I

### COURSE STRUCTURE OF B.Tech(Mechanical Engineering)

SEMESTER - I										
S. No	Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks		
				L	T	P		CIE	SEE	
1	A400101	English for skill Enhancement	HSMC	2	0	0	2	40	60	
2	A400001	Matrices and Calculus	BSC	3	1	0	4	40	60	
3	A400008	Applied Physics	BSC	3	1	0	4	40	60	
4	A403201	Engineering Mechanics	ESC	3	0	0	3	40	60	
5	A403501	Elements of Mechanical Engineering	ESC	0	0	2	1	50	-	
6	A403503	Engineering Workshop	ESC	0	1	3	2.5	40	60	
7	A400503	English Language and Communication Skills Laboratory	HSMC	0	0	2	1	40	60	
8	A400501	Applied Physics Lab	BSC	0	0	3	1.5	40	60	
9	A400505	Introduction to Social Innovation	HSMC	0	0	2	1	40	60	
10	A400704	Universal Human Values	HSMC	2	0	0	0	-	-	
<b>Total:</b>				<b>13</b>	<b>3</b>	<b>12</b>	<b>20</b>			
<b>Total hours per Week:</b>				<b>28</b>						
SEMESTER - II										
S. No	Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks		
				L	T	P		CIE	SEE	
1	A400002	Ordinary Differential Equations and Vector Calculus	BSC	3	1	0	4	40	60	
2	A400009	Engineering Chemistry	BSC	3	1	0	4	40	60	
3	A403301	Engineering Materials	PCC	2	0	0	2	40	60	
4	A405202	C Programming and Data Structures	ESC	3	0	0	3	40	60	
5	A403202	Engineering Graphics	ESC	1	0	3	2.5	40	60	
6	A400502	Engineering Chemistry Laboratory	BSC	0	0	2	1	40	60	
7	A403505	Fuels & Lubricants Laboratory	PCC	0	0	2	1	40	60	
8	A405503	C Programming and Data Structures Laboratory	ESC	0	0	2	1	40	60	
9	A400506	Engineering Exploration & Practice	HSMC	0	0	3	1.5	40	60	
10	A400703	Constitution of India	MC	2	0	0	0	-	-	
<b>Total:</b>				<b>14</b>	<b>2</b>	<b>12</b>	<b>20</b>			
<b>Total hours per Week:</b>				<b>28</b>						

**Total Credits in I Year: 40**

<b>SEMESTER - III</b>									
S.No.	Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
				L	T	P		CIE	SEE
1	A403305	Mechanics of Solids	PCC	3	0	0	3	40	60
2	A403303	Metallurgy & Material Science	PCC	3	0	0	3	40	60
3	A403304	Thermodynamics	PCC	3	0	0	3	40	60
4	A401203	Fluid Mechanics & Hydraulic Machinery	ESC	3	0	0	3	40	60
5	A402202	Basic Electrical and Electronics Engineering	ESC	3	0	0	3	40	60
6	A402508	Basic Electrical and Electronics Engineering Lab	ESC	0	0	2	1	40	60
7	A401504	Fluid Mechanics & Hydraulic Machinery Lab	ESC	0	0	2	1	40	60
8	A403506	Material Science & Mechanics of Solids Lab	PCC	0	0	2	1	40	60
9	A405501	Python Programming Laboratory	ESC	0	1	2	2	40	60
10	A400702	Gender Sensitization	MC	2	0	0	0	-	-
<b>Total:</b>				17	1	8	<b>20</b>		
<b>Total hours per Week:</b>				26					

<b>SEMESTER - IV</b>									
S.No.	Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
				L	T	P		CIE	SEE
1	A403307	Kinematics of Machinery	PCC	3	0	0	3	40	60
2	A403306	IC Engines & Gas Turbines	PCC	3	0	0	3	40	60
3	A400006	Probability, Statistics & Complex Variables	BSC	3	1	0	4	40	60
4	A403302	Manufacturing Processes	PCC	2	0	0	2	40	60
5	A403309	Instrumentation	PCC	2	0	0	2	40	60
6	A403507	Manufacturing Processes Lab	PCC	0	0	2	1	40	60
7	A403511	Instrumentation Laboratory	PCC	0	0	2	1	40	60
8	A403508	Computer Aided Machine Drawing	PCC	0	0	2	1	40	60

9	A400507	Social innovation in Practice	HSMC	0	0	2	1	40	60
10	A400701	Environmental Science	MC	2	0	0	0	-	-
11	A403801	Real-Time Research Project/Field Based Project-I	PROJ	0	0	4	2	40	60
<b>Total:</b>				15	1	12	20		
<b>Total hours per Week</b>				<b>28</b>					
<b>Total Credits in II Year: 40</b>									

### SEMESTER – V

Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
			L	T	P		CIE	SEE
	Program Core Course	PCC	3	0	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
A400102	Business Economics & Financial Analysis	HSMC	3	0	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
	Program Core Course	PCC	2	0	0	2	40	60
	Program Core Course Laboratory	PCC	0	0	2	1	40	60
	Program Core Course Laboratory	PCC	0	0	2	1	40	60
	Program Core Course Laboratory	PCC	0	0	2	1	40	60
<b>Total:</b>			<b>17</b>	<b>0</b>	<b>6</b>	<b>20</b>		
<b>Total hours per Week:</b>			<b>23</b>					

### SEMESTER - VI

Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
			L	T	P		CIE	SEE
	Program Core Course	PCC	3	1	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
	Program Core Course	PCC	3	0	0	3	40	60
	<b>Professional Elective-I</b>	PEC	3	0	0	3	40	60
A400504	Advanced English Communication Skills laboratory	HSMC	0	0	2	1	40	60
	Program Core Course Laboratory	PCC	0	0	2	1	40	60

	Program Core Course Laboratory	PCC	0	0	2	1	40	60
A400705	Intellectual Property Rights	MC	2	0	0	0		
	Industry Oriented Mini Project/ Internship	PROJ	0	0	4	2		
<b>Total:</b>			<b>17</b>	<b>0</b>	<b>10</b>	<b>20</b>		
<b>Total hours per Week</b>			<b>27</b>					
<b>Total Credits in III Year: 40</b>								

### SEMESTER – VII

Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
			L	T	P		CIE	SEE
	Program Core Course	PCC	2	0	0	2	40	60
	<b>Professional Elective-II</b>	PEC	3	0	0	3	40	60
	<b>Professional Elective-III</b>	PEC	3	0	0	3	40	60
	<b>Professional Elective-IV</b>	PEC	3	0	0	3	40	60
	<b>Open Elective-I</b>	OEC	3	0	0	3	40	60
	<b>Open Elective-II</b>	OEC	3	0	0	3	40	60
	Major Project Phase-I	PROJ	0	0	6	3	40	60
	<b>Total:</b>		17	0	6	<b>20</b>	-	-
<b>Total hours per Week:</b>			<b>23</b>					

### SEMESTER - VIII

Course Code	Course Title	Category	Hours per Week			Credits	Maximum Marks	
			L	T	P		CIE	SEE
	<b>Professional Elective- V</b>	PEC	3	0	0	3	40	60
	<b>Professional Elective-VI</b>	PEC	3	0	0	3	40	60
	<b>Open Elective-III</b>	OEC	3	0	0	3	40	60
	<b>Major Project Phase-II</b>	PROJ	0	0	18	9	40	60
	<b>Technical Seminar</b>	PROJ	0	0	4	2	100	
	<b>Total:</b>		9	0	22	<b>20</b>		
<b>Total hours per Week</b>			<b>31</b>					
<b>Total Credits in IV Year: 40</b>								

**FINAL TOTAL CREDITS : 160**

**Annexure-II**  
**Service subjects offered by Mechanical Engineering Department**

<b>S.No.</b>	<b>Course Code</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>CREDITS</b>
1	A403201	Engineering Mechanics for B.Tech (Mech.Engg.) & B.Tech.(CivilEngg.) II Sem	3	0	0	0
2	A403502	Computer aided Engineering Drawing for all branches except B.Tech.(Mech.Engg.) and B.Tech.(Civil Engg.)	0	1	2	2
3	A403504	Engineering work shop Practice for B.Tech.(EEE)	0	0	3	1.5
4	A403503	Engineering work shop for B.Tech (Mech.Engg.) & B.Tech.(CivilEngg.) II Sem	0	1	3	2.5

**ANNEXURE-III**

<b>OPEN ELECTIVES OFFERED BY MECHANICAL ENGINEERING DEPARTMENT IN VII AND VIII SEMESTERS</b>						
Course Code	Course Title	Category	Hours per Week			
			L	T	P	C
A403383	Fundamentals of Engineering Materials	OE-I	3	0	0	3
A403377	Basics of Thermodynamics	OE-I	3	0	0	3
A403357	Fundamentals of Manufacturing Processes	OE-II	3	0	0	3
A403379	Fundamentals of Automobile Engineering	OE-II	3	0	0	3
A403382	Fundamentals of Mechanical Engineering	OE-III	3	0	0	3
A403378	Waste to Energy	OE-III	3	0	0	3