

## **1.2.2 List of of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System**

### **Department of Mechanical Engineering**

#### **M.Tech- Thermal Engineering**

#### **INDEX**

<b>S.No</b>	<b>Description of the document</b>	<b>Page No</b>
1	AR 16 Curriculum	1-2
2	6 <sup>th</sup> BoS Minutes	3-8

**Department of Mechanical Engineering**  
**Thermal Engineering**

[Minimum Credits to be earned:72]

First Semester							
No	Course Code	Course	POs	Periods			
				L	T	P	C
1	16MEX101	Advanced Optimization Techniques		4	-	-	4
2	16THE102	Advanced Thermodynamics		4	-	-	4
3	16THE103	Finite Element Analysis		4	-	-	4
4		Elective I		4	-	-	4
5		Elective II		4	-	-	4
6	16THE104	Thermal Engineering Lab			-	3	2
7	16THE105	Term Paper			-	-	2
Total				20	-	3	24
Second Semester							
1	16THE201	Advanced Heat and Mass Transfer		4	-	-	4
2	16THE202	Computational Methods For Fluid Flow		4	-	-	4
3	16THE203	Fuels and Combustion		4	-	-	4
4		Elective III		4	-	-	4
5		Elective IV		4	-	-	4
6	16THE204	Computational Methods Lab			-	3	2
7	16THE205	Comprehensive Viva			-	-	2
Total				20	-	3	24
Third Semester							
No	Course Code	Course	POs	Periods			
				L	T	P	C
1	16THE301	Internship		-	-	-	4
2	16THE302	Project		-	-	-	-
Total				-	-	-	4
Fourth Semester							
1	16THE302	Project		-	-	-	20

**Commented [Ma1]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma2]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma3]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma4]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

### List of Elective Courses

<b>Elective I</b>							
No	Course Code	Course	POs	Periods			
				L	T	P	C
1	16THE001	Advanced Fluid Mechanics		4	-	-	4
2	16THE002	Energy and Environmental Engineering		4	-	-	4
3	16THE003	Turbo Machines		4	-	-	4
<b>Elective II</b>							
1	16THE004	Combustion and emissions in IC engines		4	-	-	4
2	16THE005	Convective Heat Transfer		4	-	-	4
3	16THE006	Non-Conventional Energy Sources		4	-	-	4
<b>Elective III</b>							
1	16THE007	Energy Management		4	-	-	4
2	16THE008	Equipment Design for Thermal Systems		4	-	-	4
3	16THE009	Thermal and Nuclear power Plants		4	-	-	4
<b>Elective IV</b>							
1	16THE010	Jet propulsion and Rocketry		4	-	-	4
2	16THE011	Advanced Refrigeration and Air conditioning Systems		4	-	-	4
3	16THE012	Thermal Measurements and Process Controls		4	-	-	4

**Commented [Ma5]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma6]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma7]:** Approved- 6<sup>th</sup> BOS (21.11.2015)

**Commented [Ma8]:** Approved- 6<sup>th</sup> BOS (21.11.2015)








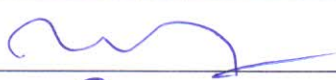







**GMR INSTITUTE OF TECHNOLOGY, RAJAM**  
**DEPARTMENT OF MECHANICAL ENGINEERING**








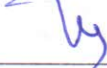

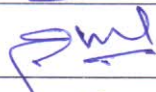

Dt.21.11.2015

The following faculty members attended the BOS meeting in the Department of Mechanical Engineering on 21.11.2015 at 2-F-05 Class Room.

**Agenda:**

1. SWOT & GAP Analysis of the structure and curriculum under AR13 regulations.
2. Review & Finalization of course structure of UG programmes under AR16 regulations.
3. Review & Finalization of course titles & content of UG Programmes under AR16 regulations.
4. Review & Finalizations of course titles & content of PG programmes under AR16 regulations.
5. Review & Revision of continuous assessment & semester end evaluation components under AR16 Regulations.
6. Review & Review & Revision of continuous assessment system for AR16 regulations.
7. Any other with the permission of the Chairman.

Name of the Faculty	Signature
Dr.K.Ramji Professor, Andhra University, Visakhapatnam	
Dr.A.Krishnaiah Professor, Osmania University, Hyderabad	
Dr.Ch.Suryanarayana, Scientist G, Head Propulsion & Additional Director, NSTL- Visakhapatnam	
Dr. V Chitti Babu Professor, HOD-MECH	
Dr. S V Ramana, Professor.	
Dr. M Srinivasa Rao, Professor.	
Dr. V.Rambabu, Professor.	
Dr. R Umamaheswara Rao, Asso.Professor.	
Dr.D.Srinivasa Kumar, Asso.Professor	
Sri. M V S Babu, Asso.Professor	
Sri. P Govinda Rao, Asso.Professor.	
Dr. K Prasada Rao Sr.Asst.Professor	
Mrs. P N L Pavani, Sr.Asst.Professor	
Sri V.Jagadeesh, Sr.Asst.Professor	
Sri GVSS Sharma, Asst.Professor	
Sri M.Anil Kumar, Asst. Professor	

Name of the Faculty	Signature
Sri K.Santa Rao, Asst.Professor	
Sri. D Venkata Rao, Asst.Professor	
Sri. S Chiranjeeva Rao, Asst.Professor	
Sri. M Vykunta Rao, Asst.Professor	
Sri. U Sudhakar, Asst.Professor	
Sri. G Vamsidurga Mohan, Asst.Professor	
Sri. P.Sai Chaitanya, Asst.Professor	
Sri. K Simhadri, Asst.Professor	
Sri. CH. Vinod Babu, Asst.Professor	
Sri B.V.Suresh, Asst.Professor	
Mrs.Y.Sirirsha, Asst. Professor	



**GMR INSTITUTE OF TECHNOLOGY, RAJAM**  
**DEPARTMENT OF MECHANICAL ENGINEERING**







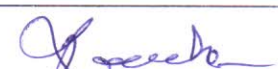
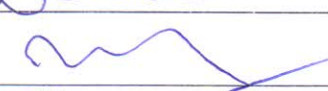


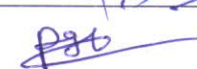




6<sup>th</sup>












Dt.20.11.2015

The following faculty members attended the BOS meeting in the Department of Mechanical Engineering on 20.11.2015 at 2-F-05 Class Room.

**Agenda:**

1. SWOT & GAP Analysis of the structure and curriculum under AR13 regulations.
2. Review & Finalization of course structure of UG programmes under AR16 regulations.
3. Review & Finalization of course titles & content of UG Programmes under AR16 regulations.
4. Review & Finalizations of course titles & content of PG programmes under AR16 regulations.
5. Review & Revision of continuous assessment & semester end evaluation components under AR16 Regulations.
6. Review & Review & Revision of continuous assessment system for AR16 regulations.
7. Any other with the permission of the Chairman.

Name of the Faculty	Signature
Dr.K.Ramji Professor, Andhra University, Visakhapatnam	
Dr.A.Krishnaiah Professor, Osmania University, Hyderabad	
Dr.Ch.Suryanarayana, Scientist G, Head Propulsion & Additional Director, NSTL- Visakhapatnam	
Dr. V Chitti Babu Professor, HOD-MECH	
Dr. S V Ramana, Professor.	
Dr. M Srinivasa Rao, Professor.	
Dr. V.Rambabu, Professor.	
Dr. R Umamaheswara Rao, Asso.Professor.	
Dr.D.Srinivasa Kumar, Asso.Professor	
Sri. M V S Babu, Asso.Professor	
Sri. P Govinda Rao, Asso.Professor.	
Dr. K Prasada Rao Sr.Asst.Professor	
Mrs. P N L Pavani, Sr.Asst.Professor	
Sri V.Jagadeesh, Sr.Asst.Professor	
Sri GVSS Sharma, Asst.Professor	
Sri M.Anil Kumar, Asst. Professor	

Name of the Faculty	Signature
Sri K.Santa Rao, Asst.Professor	
Sri. D Venkata Rao, Asst.Professor	
Sri. S Chiranjeeva Rao, Asst.Professor	
Sri. M Vykunta Rao, Asst.Professor	
Sri. U Sudhakar, Asst.Professor	
Sri. G Vamsidurga Mohan, Asst.Professor	
Sri. P.Sai Chaitanya, Asst.Professor	
Sri. K Simhadri, Asst.Professor	
Sri. CH. Vinod Babu, Asst.Professor	
Sri B.V.Suresh, Asst.Professor	
Mrs.Y.Sirisha, Asst. Professor	

**GMR INSTITUTE OF TECHNOLOGY, RAJAM**  
**DEPARTMENT OF MECHANICAL ENGINEERING**

Dt 21.11.2015

**Minutes of BOS Meeting**

Date: 21.11.2015

Time: 9.30 AM

Venue: Room No 2-F-05

Members Present:

**Name of the Faculty**

Dr.K.Ramji, Professor, Andhra University, Visakhapatnam

Dr.A.Krishnaiah, Professor, Osmania University, Hyderabad

Dr.Ch.Suryanarayana, Scientist G, Head Propulsion &  
Additional Director, NSTL- Visakhapatnam

Dr. V Chitti Babu, Professor, HOD-MECH

Dr. S V Ramana, Professor.

Dr. M Srinivasa Rao, Professor.

Dr. V.Rambabu, Professor.

Dr. R Umamaheswara Rao, Asso.Professor.

Dr.D.Srinivasa Kumar, Asso.Professor

Sri. M V S Babu, Asso.Professor

Sri. P Govinda Rao, Asso.Professor.

Dr. K Prasada Rao Sr.Asst.Professor

Mrs. P N L Pavani, Sr.Asst.Professor

Sri V.Jagadeesh, Sr.Asst.Professor

Sri GVSS Sharma, Asst.Professor

Sri M.Anil Kumar, Asst. Professor

Sri K.Santa Rao, Asst.Professor

Sri. D Venkata Rao, Asst.Professor

Sri. S Chiranjeeva Rao, Asst.Professor

Sri. M Vykunta Rao, Asst.Professor

Sri. U Sudhakar, Asst.Professor

Sri. G Vamsidurga Mohan, Asst.Professor

Sri. P.Sai Chaitanya, Asst.Professor

Sri. K Simhadri, Asst.Professor

Sri. CH. Vinod Babu, Asst.Professor

Sri B.V.Suresh, Asst.Professor

Mrs.Y.Sirirsha, Asst. Professor



### Minutes of the meeting :

- As per the AICTE no. of credits should have to be 176 (CBCS).
- Credit for theory are less (3 given) better to increase in first year
- For first year for 4 classes minimum -4 credits should be there.
- Normalization between theory and lab required.
- Tutorial may not be required for all courses.
- For Machine Drawing credits should be 4 for 6 practice classes to split between Theory, Laboratory (2+4).
- 5<sup>th</sup> Semester basic elements of Machine Drawing "basic" should be removed (BEMD)

### For ED

- One additional theory class should be added credits should be more

AOT should be one elective.

- Elective make into groups. Then it is easy to adopt in CBCS.
- For EM : Principle of virtual work should be incorporated (or) spatial components of forces

### BOOKs :

- Latest publication years need to be included

### Maths

- Residue theorem should be incorporated.

### Basic electronics part in BE

- Environmental studies credits can be reduced.

### Material Science:

Production of material (Furnaces) can be added

One book added

MMS and PT to be modified topics repetitions should be avoided.

FM & HM to be modified.

It would be good if we combine & present both MatCAD and Matlab together.

Put subject headings in IEM

In AIM add another text book

To put clutches in DMM

Metrology and Instrumentation is to be shifted to next semester

Vibration work bench for Dynamics lab

Fracture mechanics and fatigue to be modified i.e. split in each unit.

In place of Rapid prototyping Additive manufacturing to be introduced.

Introduction of New course:

Engineering Mathematics-III, Object Oriented Programming through Java, Java Lab, Rigid Body Dynamics,

Industrial Tribology and Supply Chain Management.

V. Chittababu  
Chairman-BOS.