

Dr. Ambedkar Institute of Technology
Department of Mechanical Engineering

The documents enclosed are verified and approved.



HOD

Dept. of Mechanical Engineering

Department of Mechanical Engineering
Dr. Ambedkar Institute of Technology
Bengaluru - 560 056.



Panchajanya Vidya Peetha Welfare Trust (Regd)

Dr. Ambedkar Institute of Technology

An Autonomous Institution, Affiliated to Visvesvaraya Technological University, Belagavi,
Aided by Govt. of Karnataka, Approved by All India Council for Technical Education (AICTE), New Delhi
Accredited by NBA and NAAC with 'A' Grade

BDA Outer Ring Road, Mallathalli, Bengaluru - 560 056

Ref. No.

Date :

BOS2017-2018,

Changes are mentioned below ,

The students with shortage in credit after completion of 3rd ,5th ,7th semester should get the remaining credits by going to industry & undergo a intensive training for atleast 4weeks.

To introduce tutorial hours for courses with analytical /numerical.

Sl.No	Subject Code	Subject Title	Remarks
1	ME15/25	Elements of Mechanical Engineering	Syllabus Revised
2	ME31	Fluid Mechanics	Syllabus Revised
3	ME32	Engineering Thermodynamics	Syllabus Revised
4	ME41	Turbo Machines	Syllabus Revised
5	ME44	Manufacturing Process - 2	Syllabus Revised
6	ME553	Power Plant Engineering	Syllabus Revised
7	ME61	Design Of Machine Elements-2	Syllabus Revised
8	ME62	Finite Element Method	Syllabus Revised
9	ME63	Mechanical Vibrations	Syllabus Revised
10	ME64	Operations Researchj	Syllabus Revised
11	ME71	Control Engineering	Syllabus Revised
12	ME732	Product Design & Manufacturing	Syllabus Revised
13	ME733	Automotive Engineering	Syllabus Revised
14	ME742	Foundry Technology	Syllabus Revised


Department of Mechanical Engineering
BOS Chairman
Dr. Ambedkar Institute of Technology
Bengaluru - 560 056.


Principal
PRINCIPAL
Dr. Ambedkar Institute of Technology
Bengaluru-560 056

Dr. Ambedkar Institute of Technology
Department of Mechanical Engineering

BOARD OF STUDIES MEETING

To

Date: 30-05-2017

The Dean (Academic)
Dr. AII, Bangalore
Dear Madam,

Sub: Minutes of BOS meeting

The Board of studies [BOS] was held in the seminar hall of Mechanical Engineering Department on 22 march 2017. Meeting was begun at 10.00 A.M by welcoming the members. Draft Copies of the syllabus was circulated to members for scrutiny and discussion. After scrutiny and discussion of the curriculum and syllabus the following points were also discussed the same is placed before the academic council for discussion and approval.

1. The problems focused by those students who joined over college in the 3rd, 5th, 7th semester from other colleges have to get 200 credits, where as some of the students after completing their course (i.e. after completion of the 8th semester) They are getting 198, 199, 197 credits. These students should get the remaining credits by doing some project/work shop/ on industries. Regarding these problems. The members discussed all factors and they give their advice that these students should go to the industry and undergo an intensive training for at least 2 weeks or as prof. sheshadri of Bombay III said the students should do literature survey on one of the specified subject and he must submit a report and present a culture on the same subject:
2. External BOS member Sri Gurusurthy has suggested that the students should take small study project and analyse and execute those project through PERT and CPM.

The following members were present during the meeting:

1. Dr. U. S. Mallik
Professor and Head - Mechanical Engineering, Siddaganga Institute of Technology,
Tumkur.
2. Dr. Shreedhar Sheshadri
Professor in Mechanical Engineering, Indian Institute of Technology, Powai, Mumbai.
3. Dr. Paul Vizhyian
Professor, Mechanical Engineering Department, UVCE., Bangalore
4. Dr. Raju Rajendran, Scientist G and Group Director, Materials Technology Group, Gas
Turbine Research Establishment, Bangalore.

5. Mr. Nikil R B, Director, Anvesha Fab Industries Pvt Ltd, Bangalore.
6. Mr. Raghunath Preetham, Group Chief Executive Officer Sansera Engineering Pvt Ltd, Bangalore
7. Sri. G. Gurumurthy, Vice President, Design Led Manufacturing Cyient Limited, Infotech IT park, Plot No 110A & 110B, Phase I, Electronic City Hosur Road, Bangalore.
8. Dr. B. Ravindra ,Professor, Dr.AIT, Bangalore
9. Dr. K. M. Narayanappa Professor, Dr.AIT, Bangalore
10. Dr. K. M Purushothama Associate Professor, Dr.AIT, Bangalore
11. Dr. B. GangadharShetty Professor, Dr.AIT, Bangalore
12. Dr. T. N. Raju Assistant Professor, Dr.AIT, Bangalore
13. Dr. S. Sathish Assistant Professor, Dr.AIT, Bangalore
14. Dr. H. M Somashekar Assistant Professor, Dr.AIT, Bangalore
15. Dr. N. Gangadhar Assistant Professor, Dr.AIT, Bangalore

Thanking You.

Yours Sincerely



(Dr. L. Chandrasagar)
Prof. & Head - Chairman BOS
Dept of Mech Engg.
Dr. AIT, Bangalore - 560056

PROFESSOR AND HEAD
Mechanical Engineering Department
Dr. Ambedkar Institute of Technology
BANGALORE - 560 056



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Ref. No.

BOS2018-2019,

Date :

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The students with shortage in credit after completion of 3rd ,5th ,7th semester should get the remaining credits by going to industry & undergo a intensive training for atleast 4weeks.

To introduce tutorial hours for courses with analytical /numerical.

Sl.No	Subject Code	Subject Title	Remarks
1	18MEL15/25	Computer Aided Engineering Drawing	Syllabus Revised
2	ME35	Metrology & Measurements	Syllabus Revised
3	MEL36	Computer Aided Machine Drawing	Syllabus Revised
4	ME44	Manufacturing Process - I	Syllabus Revised
5	ME45	Material Science & Metallurgy	Syllabus Revised
6	ME51	Design Of Machine Elements-I	Syllabus Revised
7	ME52	Dynamics Of Machines	Syllabus Revised
8	ME53	Heat Transfer	Syllabus Revised
9	ME553	Power Plant Engineering	Syllabus Revised
10	ME62	Finite Element Method	Syllabus Revised
11	ME63	Mechanical Vibrations	Syllabus Revised
12	ME653	Automotive Engineering	Syllabus Revised
13	ME661	Industrial Management	Syllabus Revised
14	ME662	Advanced Welding Processes	Syllabus Revised
15	MEE03	Power Plant Engineering	Syllabus Revised
16	MEE04	Product Design And Development	Syllabus Revised
17	MEE05	Composite Materials Technology	Syllabus Revised

Department of Mechanical Engineering

Dr. Ambedkar Institute of Technology
Ph: 23211232, Fax: 080-23217789, E-mail : principal@drait.edu.in, Website : www.drait.edu.in
Bengaluru - 560 056.

Principal
Dr. Ambedkar Institute of Technology
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Ref. No.

Date :

18	ME71	Control Engineering	Syllabus Revised
19	ME72	Hydraulics & Pneumatics	Syllabus Revised
20	ME811	Computer Integrated Manufacturing	Syllabus Revised
21	ME812	Computational Fluid Dynamics	Syllabus Revised
22	ME813	Smart Materials	Syllabus Revised

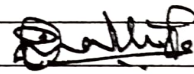
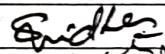
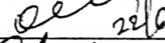

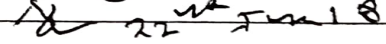
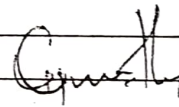
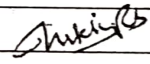
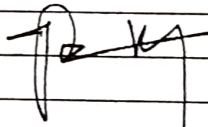
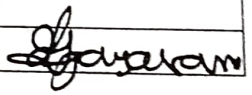
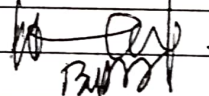
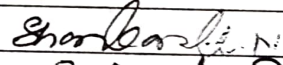
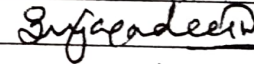
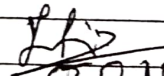
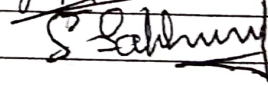
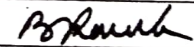

HOD
Department of Mechanical Engineering
BOS CHAIRMAN
Dr. Ambedkar Institute of Technology
Bengaluru - 560 056.

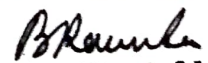

PRINCIPAL
Dr. Ambedkar Institute of Technology
Bengaluru-560 056

DEPARTMENT OF MECHANICAL ENGINEERING
Dr. Ambedkar Institute of Technology, Bengaluru-560056

BOARD OF STUDIES MEETING at 10.00am on 22nd JUNE 2018

All the enclosed suggestions in the courses listed are ratified with modifications for the forth coming academic year.

Name	Signature
VTU NOMINEE(01)	
Dr. U S Mallik	
EXTERNAL SUBJECT EXPERTS	
Dr. Sreedhara Sheshadri	
Dr. Rudra Naik	
Dr. S Paul Vizhayan	 22/6/18
Dr. P L S Murthy	 22 nd June 18
INDUSTRY REPRESENTATIVES	
Dr. Rajendran	
Mr. Renil Padmanabhan	
Mr. Gurumurthy G	
ALUMNI WITH PG DEGREE	
Mr. Nikhil R B	
INTERNAL FACULTY	
DESIGN	
Dr. K M Purushothama	
Mr. A S Jayaram	
MANUFACTURING	
Dr. K M Narayanappa	
Dr. B G Shetty	
THERMAL	
Mr. N Shashikantha	
Mr. S K Jagadeesh	
MATERIALS	
Dr. T N Raju	
Dr. S Sathish	
CHAIRMAN	
Dr. B Ravindra	


PROFESSOR AND
Mechanical Engineering
Dr. Ambedkar Institute of
BANGALORE - 560

B.O.S. Meeting.

22-06-2018

Agenda:

- 1) First & second semester syllabus & scheme for 2018-2019 batch students.
- 2) (Syllabus) & scheme for 3rd to 8th semester students of 2018-2019 batch.
- 3) Third & 4th semester scheme & syllabus for 2017-2018 batch.
- 4) Fifth & sixth semester of 2016-2017 batch scheme & syllabus.
- 5) Syllabus & scheme for 2015-2016 batch students of seventh & eight semester.

Professor & HOD Sri. B. Ravindra, chairman of B.O.S meeting whole heartedly invited all the external & internal B.O.S members for the meeting. The following resolution was made.

Resolution:

- 1. It was resolved to incorporate the deliberations, corrections, addition, deletion made by the external BOS members & internal B.O.S members made after detail discussion made by the members.
- 2. P.G. Syllabus of Machine Design (M-Tech) has been thoroughly reviewed and few suggestions ^{are made} have been incorporated.

NIKHIL B
 G. GURURAJAN
 Dr. U.S. Totallis
 Dr. J. L. Srinivas Murthy
 Dr. Rudra Akela
 N. Shashikiranth
 Dr. K.M. Narayanaiah
 Dr. SATISH S

Shukla
 Gururaj
 Totallis
 22-06-18
 22 June 18
 22/6/18
 22/6/18
 22/6/18

Dr B G Shetty
 Dr K M. Durgabhatam
 T. N. Raju
 Dr. Paul Vizham S
 SK Jagadeesh

BUM
 P. K.
 J. S.
 P. S. 22/6/18
 S. J. 22/6/18

1. It's better to print SEE marks as 50 both in Syllabus book as well as question paper (SEE).
2. It's requested to provide the Provisional Syllabus in advance (at least 1 month) so that corrections such as addition, deletion can be suggested in advance.

(Dr. P. L. Injiv Nury)

22nd June 18



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Ref. No.

Date :

BOS2019-2020,

Changes are mentioned below,

Text books to be limited up to two and remaining other books can be given as reference books

Sl.No	Subject Code	Subject Title	Remarks
1	18ME31	Material science & Metallurgy	Syllabus Revised
2	18ME15/25	Elements of mechanical engineering	Syllabus Revised
3	18MEL14/24	Computer Aided Engineering Drawing	Syllabus Revised
4	18ME43	Advance Manufacturing Process	Syllabus Revised
5	18ME34	Basic Thermodynamics	Syllabus Revised
6	18MEL35	Computer Aided Machine Drawing	Syllabus Revised
7	18ME44	Applied Thermodynamics	Syllabus Revised
8	18ME45	Kinematics Of Machines	Syllabus Revised


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BOS Chairman
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Prof & H.O.D. Dr. B. Ravindra whole heartedly welcomed all the external and internal B.O.S members for the Final B.O.S meeting.

(i) Prof has requested all the external as well as internal B.O.S members to go through the curriculum & syllabus & to approve the syllabus & scheme for 2018-19 batch onwards.

(ii) proposed scheme for P-G machine design.

(iii)

(iv)

(v) Ratification of equivalent courses

(vi) approval B.E honours & BE courses.

The following External & internal B.O.S members were present.

(i) Dr Madhu. Prof & HOD. Govt. Engg College. Ramnagar.

(ii) Dr. Dibakar Sen. Prof IISC.

(iii) Dr. P.R. Venkatesh. Prof RVCE.

(iv) Dr. Rajeswar ka dadevaranath. Prof SIT-Tumkur.

(v) Dr. Sharan a Basavaraja. Prof BMSCE

(vi) Mr. Alexander Divakaran. Director Texcelead.

(vii) Dr. K. Ramaranda Rao. C.O.O. Eskay Heat Transf & HT Hd.

(viii) Mr. Madhusudan. Director. Diagnostic Enginco.

(ix) Dr. K.m. Narayanappa.

(x) Dr. B.G. Shetty.

(xi) N. Shashikanta.

(xii) Dr. K.m. puovshottanna.

(xiii) A.S. Jayaram

(xiv) H. A. Shirappa.

(xv) S.K. Jagadeesh.

(xvi) K.C. Byregowda.

(xvii) Anurag Singh.

(xviii) DR. B. Ravindra.

The following points are mentioned by the external members

1. Engineering mathematics.

Ist sem. calculus & linear algebra.

IInd sem. Differential equations & complex variables.

Advanced calculus & Numerical methods.

2. 18ME31, Material science & metallurgy, title can be changed as Material science.

3. 18ME32 & 34 - Tutorial classes to be encouraged.

4. Metal Forming to be added in MPI/MP11.

5. CFD, Advanced subjects to be incorporated. Hybrid ~~system~~ system (Rotary m/c, noise & vibration subjects.)

6. Internship to be made compulsory. (weekly ^{1st} four days in Eighth semester - last 2 days are meant for exam)

7. 18ME15/25. conventional & non conventional energy sources to be included in EME. (18ME25)

+ Importance of units such as stress-strain, ~~displacement~~ & units to be included.

8. Turning m/c to be changed to m/c tools. 18ME25. Unit 3 & 4 to be interchanged.

UNIT I - pumps & valves to be included.

*** Ref. books to be changed with world standard books.

9. 18ME14. In CAED - include History of Engg. drawing, introduce Basic m/c parts before projection of solids.

10. Material science - include polymers, composites in unit 5, give updated std Ref. books.

Add titanium alloys, duplex materials.

11. MPI: Metal casting & welding to be changed as Manufacturing process. Automated handling of materials to be added.

12. BTD. Industrial application to be added.

13. CAM:- Assembly add 3 more models.

14. MTL → ASTM → change to BFs.

15. Mechanical measurement. New title

Cold-title - metrology & measurement)

Add. accelerators, data acquisition system & sample

16. FM/ - ATD. - Air std cycle & gas turbines

must be in 1st unit, combustion Thermodyn

& I-C engine must be in 2nd unit.

17. ~~Book~~ outlining.

KOM - case studies to be added.

*** External BOS members and Prof Dr Prashant Jeyare
requested the dept Head to send the detailed
curriculum & syllabus to all the members at least
2 weeks before the BOS meeting so that they can
go through the entire syllabus & curriculum in detail
& they can come ^{well} prepared for the meeting & can
have a meaningful discussion during BOS meeting

Staff members present.

1. T. N. Raju — ~~Signature~~
2. S. Champsatru — ~~Signature~~ 3/5/19
3. Ravindra V — ~~Signature~~ 3/5/19
4. Pavan Tejavve T — ~~Signature~~ 03/05/19
5. Rathika M. — ~~Signature~~
6. Venkatesha Reddy — ~~Signature~~ 3/6/19



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Ref. No.

BOS2020-2021,

Date :

Changes are mentioned below,

Sl.No	Subject Code	Subject Title	Remarks
1	18ME62	Heat Transfer	Syllabus Revised and Shifted From Fifth Semster
2	18MEL67	Heat Transfer Laboratory	Syllabus Revised and Shifted From Fifth Semster
3	18ME53	Turbo Machines	Syllabus Revised and Shifted From Sixth Semster
4	18MEL57	Computer Aided Manufacturing Laboratory	Syllabus Revised and Shifted From Sixth Semster
5	18ME552	Composite Materials And Manufacturing	Syllabus Revised
6	18MEL66	Fluid Mechanics And Machines Laboratory	Syllabus Revised and Shifted From Sixth Semster
7	18ME553	Automobile Engineering	Syllabus Revised
8	18ME63	Mechanical Vibrations	Syllabus Revised
9	18ME642	Advance Welding Techonology	Syllabus Revised

Department of Mechanical Engineering
BOS CHAIRMAN
Dr. Ambedkar Institute of Technology
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Bengaluru-560 056

**Dr Ambedkar Institute of Technology
Department of Mechanical Engineering,
Bengaluru – 560 056**

MINUTES OF THE BOARD OF STUDIES MEETING

Board of Studies (BOS) meeting of Mechanical Engineering (UG and PG) was held on 14-08-2021 at 10:00 A.M, Dr Ambedkar Institute of Technology, Bengaluru via Google meet App. The following members were present:

Sl. No.	Members present		
1	Dr. T.N. Raju	Head, Department of Mechanical Engineering, Dr. AIT	Chairperson
2	Dr. Dibakar Sen	Professor, Centre for Product Design and Manufacturing, Indian Institute of Science, Bangalore	External subject expert
3	Dr. D. Madhu	Professor & Head, Mechanical Engineering Department, Government Engineering College, Ramnagar	VTU nominee
4	Dr. J. Shantanubaswaraja	Associate Professor, Mechanical Engineering Department, B M S College of Engineering Bangalore	External subject expert
5	Dr. P. R. Venkatesh	Professor, Mechanical Engineering Department, R V College of Engineering, Bangalore	External subject expert
6	Dr. Rajeswar Kadadevarutti	Professor, Industrial Engineering Department, Siddaganga Institute of Technology, Tumkur	External subject expert
7	Mr. Satyanarayana Murthy R	Senior Deputy Manager (D & E SS NS – 1), Bharath Electronics Limited, Bengaluru	Industry representative
8	Mr. Alexander Divakaran	Director, Texaco Ltd, Bangalore	Industry representative
9	Dr. K. Ramananda Rao	Chief operating officer, Eskay Heat Transfers Pvt Ltd, Bengaluru	Industry representative
10	Mr. Madhusudan N	Diagnostic Engineers, Bengaluru	Aluminee
11	Mr. Nitesh Kumar Dixit	Head of Mechanical Engineering Department, Institute of Engineering and Technology, Dr Rammandhar Lohia Avadh University, Avadhya	Montee Institution member
12	Dr. K. M. Narayanaswpa	Professor, Department of Mechanical Engineering, Dr. AIT	Internal member

13	Dr.B.Gangadhara Shetty	Professor, Department of Mechanical Engineering, Dr.AIT	Internal member Convener
14	Dr.K.M.Purushothama	Professor, Department of Mechanical Engineering, Dr.AIT	Internal member
15	Mr. N.Shashikanth	Associate Professor, Department of Mechanical Engineering, Dr.AIT	Internal member
16	Mr.S. K. Jagadeesh	Associate Professor, Department of Mechanical Engineering, Dr.AIT	Internal member
17	Mr. K.C.Byre Gowda	Assistant Professor, Department of Mechanical Engineering, Dr.AIT	Internal member
18	Dr.A. S. Prashanth	Assistant Professor, Department of Mechanical Engineering, Dr.AIT	Internal member (P G)

Member absent			
01	Mr.H. A. Shivappa	Assistant Professor, Department of Mechanical Engineering, Dr.AIT	Internal member

The chairman welcomed the members of the committee and requested the convener to put the following agenda for discussion:

(A) Proposed scheme and syllabus of B. E, Mechanical Engineering (UG), for the current academic year 2020-21 and its approval.

YEAR	SEMESTER	BATCH	CREDITS
FIRST	1 st and 2 nd	2020-21	175
SECOND	3 rd and 4 th	2019-20	175
THIRD	5 th and 6 th	2018-19	175
FOURTH	7 th and 8 th	2017-18	200

After elaborate discussion of the agendas the board given following suggestions:

I. BE in Mechanical Engineering (UG)

1. The Board considered and approved the proposed B.E 1st and 2nd Semester Syllabus (Syllabus are discussed in the previous year BOS also in detail).
2. The Board considered and approved the proposed B.E 3rd and 4th Semester Scheme and Syllabus (Scheme and syllabus are discussed in the previous year BOS also in detail).
3. The Board considered and approved the proposed B.E 5th and 6th Semester Scheme and Syllabus with following modifications.

- (i) The institution is suggested to conduct online classes in the month of September of this academic year. Hence board suggested to ensure proper internet facility between the faculty and students for conducting online classes. Further, suggested to make video recording of the contents to send across the students. This may help more, for the students for discussion and clarifying doubts.
 - (ii) Suggested to shift heat transfer theory course and heat transfer laboratory from fifth semester to sixth semester. In turn, suggested to shift turbo machines theory course and Computer Aided Manufacturing Laboratory from sixth semester to fifth semester.
 - (iii) Suggested to include Finite Element Method as one of the core course instead of elective course. Because it is most desired course for modelling and analysis in industries. Moreover, conducting Computer Aided Modelling and Analysis Laboratory without the knowledge of Finite Element Method is difficult. However Dr K M Purushothama, Professor defended it, saying that Mechanical vibration course is more important for Mechanical Engineers and hence, it is decided to include Finite Element Method as professional elective, and not as a core course.
 - (iv) Condensation, boiling and compact heat exchanger topics shall be incorporated in heat transfer course.
 - (v) In the course of Computer Aided Design and Manufacturing, the board, suggested to change unit II title from computer graphics to geometric modelling, and change the topic of "topology of geometry modelling" to "elements of geometric modelling" in Unit II.
 - (vi) Board suggested to change the titles of units 1, 2, 3 and 4 in Composite Materials & Manufacturing course.
 - (vii) Board suggested to shift Fluid Mechanics and Machines Laboratory from sixth to fifth semester. But this laboratory consists of basic experiments on fluid flow which will be studying in fluid mechanics course of fourth semester and experiments on turbines and pumps which will be studying in turbo machines course of fifth semester. Hence it is decided to keep this laboratory in sixth semester after studying all topics.
 - (viii) Board suggested to include working of various sensors used in automobile systems in Automobile Engineering course.
 - (ix) Board suggested to have practical exposure to students in Mechanical Vibration course and how new concepts help in reducing vibrations by inviting experts from industry.
 - (x) Board suggested to include numericals in both Advanced Welding Technology and Production and Operations Management course.
4. The Board considered and approved the proposed B.E 7th and 8th Semester Scheme and Syllabus (Syllabus are discussed in the previous year BOS also in detail).

II.M Tech in Machine Design (PG)

(B) Proposed scheme and syllabus of M Tech in Machine Design (PG), for the current academic year 2020-22 and its approval.

YEAR	SEMESTER	BATCH	CREDITS
FIRST and SECOND	1 st to 4 th	2020-21	88

(1) The Board considered and approved the M Tech 1st and 2nd Semester Scheme and Syllabus with following modifications.

- i. Incorporate laboratory components in course, Advanced Theory of Vibrations such as FFT analyser.
- ii. Suggested to incorporate problem based topics in unit - II of Advanced Design of Mechanism course.
- iii. Suggested to change subject title of the course from Experimental Mechanics to Experimental Methods as per contents of the syllabus.
- iv. Suggested to change course title of Robust Design to Design of Additive manufacturing as per contents of the syllabus.
- v. Incorporate topics of Robots in Material Handling Equipment Design course to impart modern outlook in next academic year.
- vi. Suggested to change subject title of Acoustics and Noise Control Engineering course to Technical Acoustics as per contents of the syllabus.
- vii. Suggested to change course title of Advanced Machine Design to Design for Fatigue Loading as per contents of the syllabus.
- viii. Suggested to change course title of Tribology & Bearing Design to tribology & Bearing Technology as per contents of the syllabus.

2. The Board considered and approved the M Tech 3rd and 4th Semester Scheme and Syllabus with following modifications.

1. Board suggested that student should select a subject for Self-Study – Massive Open Online Course (MOOC) with at least 16 weeks content which is confined to his core specialization.

(C) Vision and Mission, PEO and PO of the department are revised, as suggested by the recent NBA visit to the department. Your kind approval for the same is sought.

Department Vision

To create Dynamic, Resourceful, Adept and Innovative Technical professionals to meet global challenges in Mechanical engineering discipline and other interdisciplinary requirements.

Department Mission

- To impart state of the art knowledge in basic and applied areas of Mechanical Engineering - vis-a- vis the development in industries at an affordable cost.
- To provide state-of-the-art infrastructure & laboratories as necessitated from academics, to promote futuristic research in the areas of design, materials, thermal, manufacturing engineering, managerial skills and related interdisciplinary areas
- To facilitate faculty development through quality improvement programs.
- To strengthen interaction with industries and research organizations from internship and joint research perspectives.
- To instill moral and ethical values with social and professional commitment.

Program Education Objectives

PEO1: Post Graduates to have sufficient knowledge in specialized areas of machine design and to promote state of the art societal/industrial research and developments leading to Innovations

PEO2: Post Graduates to have a sound comprehensive skills related to problem identification and problem solution in area of machine design in particular and interdisciplinary areas in general

PEO3: Post Graduates to have moral and ethical values with societal commitments along with communication skills and engage in independent and lifelong learning along with knowledge dissemination.

Program Outcomes

- PO1: An ability to independently carry out research /investigation and development work to solve practical problems
- PO2: An ability to write and present a substantial technical report/document

PO3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program

PO4: An ability to identify futuristic research requirements

Dr.K. M. Narayanappa

Dr.K.M. Purushothama

Mr. N. Shashikanth

Mr.S. K. Jagadeesh

Mr.K. C. Byre Gowda

Mr. H. A. Shivappa

Dr. A. S. Prashanth

Dr. Dibakar Sen

Dr. D. Madhu

Dr. J. Sharana Basavaraja

Dr. P. R. Venkatesh

Dr. Rajeswar
Kadadevarmutt

Mr. Sathyanarayana
Murthy R

Mr. Alexander Divakaran

Dr. K. Ramananda
Rao

Mr. Madhusudan N

Mr. Nitesh Kumar Dixit

Dr. B. Gangadhara Shetty

Dr. T. N. Raju

Department of Mechanical Engineering

NEW TOPICS ADDED (2020-21)

Sub Code	Subjects	New topics added
18ME31	Material Science And Metallurgy	Biomaterials: Introduction, Materials used as biomaterials, advantages, disadvantages and applications.
18ME33	Manufacturing Processes - I	Forging, Rolling, Die-design, residual stresses in forging
18ME34	Basic Thermodynamics	Availability and irreversibility, Ideal gases and mixtures
18MEL38	Fitting And Forging Workshop	New Lab
18ME42	Fluid Mechanics	Introduction to CFD
18ME43	Manufacturing Processes - II	Hobbing
18ME44	Applied Thermodynamics	Stirling cycle; Combustion in IC engines; Alternate Fuels, Steam nozzles
18ME52	Dynamics of Machines	
18ME53	Turbomachines	Thermodynamics of fluid flow
18ME54	Computer Aided Design and Manufacturing	Hardware for CAD, Topology of the geometry modelling, Operational features of CNC machine, Canned Cycles
18ME552	Composite Materials and Manufacturing	Recycling of Metal Matrix Composites, Nanocomposites, Polymer Nano Composites, 3D Printing of Composites
18ME553	Automobile Engineering	Sensors used in automobile systems
18ME554	Mechatronics and Microprocessor	New subject
18ME555	Principles of Metal Forming	New subject
18ME556	Experimental Stress Analysis	Analysis of plane polariscope by Jones calculus
18ME62	Heat Transfer	Variable thermal conductivity, Critical thickness of insulation, Boiling and condensation, Compact heat exchangers,
18ME642	Advanced Welding Processes	Plasma arc welding, Welding of Cu, Al, Ti and Ni alloys – processes
18ME644	Production And Operations Management	New subject
18ME645	Finite Element Method	Thermal Analysis, Steady state Heat Transfer, One Dimensional Heat Conduction – Governing Equation – Boundary Condition. Temperature Gradient & B matrix functional approach to Heat Conduction – Element Conductivity Matrix. Assembly & Boundary Conditions, Heat Flux

		Boundary Conditions, Forced and Natural Boundary Conditions – Numerical problems.
ME71	Control Engineering	Positive Feedback systems
ME811	Computer Integrated Manufacturing	Flexible Manufacturing Systems, Additive Manufacturing Systems, Future of Automated Factory
MEE03	Power Plant Engineering	Pulverising of fuels and burning Fuel burning principles
MEE05	Composite Materials Technology	Recycling of Metal Matrix Composites, Nanocomposites, Polymer Nano Composites, 3D Printing of Composites



Panchajanya Vidya Peetha Welfare Trust (Regd)
Dr. Ambedkar Institute of Technology

An Autonomous Institution, Affiliated to Visvesvaraya Technological University, Belagavi,
Aided by Govt. of Karnataka, Approved by All India Council for Technical Education (AICTE), New Delhi
Accredited by NBA and NAAC with 'A' Grade


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Ref. No. **BOS 2021-2022**,

Date :

Changes are mentioned below,

Sl.No	Subject Code	Subject Title	Remarks
1	18ME31	Material Science & Metallurgy	Syllabus Revised
2	18ME33	Manufacturing Processes-I	Syllabus Revised
3	18ME34	Basic Thermodynamics	Syllabus Revised
4	18MEL38	Fitting And Forging Shop	New Subject
5	18ME42	Fluid Mechanics	Syllabus Revised
6	18ME43	Manufacturing Processes-II	Syllabus Revised
7	18ME44	Applied Thermodynamics	Syllabus Revised
8	18ME52	Dynamics Of Machines	Syllabus Revised
9	18ME53	Turbo Machines	Syllabus Revised
10	18ME54	Computer Aided Design And Manufacturing	Syllabus Revised
11	18ME552	Composite Materials And Manufacturing	Syllabus Revised
12	18ME553	Automobile Engineering	Syllabus Revised
13	18ME554	Mechatronics And Microprocessor	New Subject
14	18ME555	Principle Of Metal Forming	New Subject
15	18ME556	Experimental Stress Analysis	Syllabus Revised
16	18ME62	Heat Transfer	Syllabus Revised
17	18ME642	Advanced Welding Processes	Syllabus Revised
18	18ME644	Productions And Operations Management	New Subject
19	18ME645	Finite Element Method	Syllabus Revised
20	ME71	Control Engineering	Syllabus Revised
21	ME811	Computer Integrated Manufacturing	Syllabus Revised
22	MEE03	Power Plant Engineering	Syllabus Revised
23	MEE05	Composite Materials Techonology	Syllabus Revised


HOD
Department of Mechanical Engineering
BOS Chairman
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Principal
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