

MINUTES OF THE 37th MEETING OF THE
BOARD OF STUDIES IN MECHANICAL ENGINEERING,

21-12-2019

The minutes of the meeting of the Board of Studies in Mechanical Engineering held on 21.12.2019 at 10.30 AM in Library Block A/C Conference Hall.

The following members were present in the meeting,

S.NO	NAME	DESIGNATION	SIGNATURE
1.	Dr. K. Marimuthu	Chairman	
2.	Dr. R. Saravanan	University Nominee (UG & PG)	
3.	Prof. T. Sundara Rajan	Expert Member - Academic	
4.	Dr. V. Prabhuraja	Expert Member - Academic	
5.	Er. B. Jayakumar	Expert Member - Industry	
6.	Mr. M. Nachimuthu	Expert Member - Industry	
7.	Mr. A. S. Shivakumaran	Co-opted Member	
8.	Dr. T. Snidhar	Member	
9.	Dr. R. Rajesh	Member	
10.	Dr. N. Rajam Ramaswamy	Member	
11.	Dr. A. S. Krishnan	Member	
12.	Dr. G. Sureshkannan	Member	
13.	Mr. P. Ramakrishnan	Member	
14.	Dr. M. Velliangiri	Member	
15.	Dr. G. Suganya Prasadarshini	Member	
16.	Mr. M. Karthikeyan	Member	
17.	Mr. C. Balaji Ayyanar	Member	
18.	Mr. K. Karthik	Member	
19.	Dr. S. Balasubramanian	Member	
20.	Dr. C. Vivek	Member	
21.	Dr. G. Sivakumar	Member	

S.NO

22

Dr. P

23

Mr. S

24

Mr. I

25

Mr.

26

Mr.

27

Mr.

28

Mr.

29

Mr.

30

Mr.

31

Ms

32

Mr.

33

Mr.

34

Mr.

35

Mr.

36

Mr.

37

Dr.

38

Mr.

39

Mr.

Mechan

outlin

salien

1. Dr. K. M

plann

Facult

the co

Engin

2. Er. Ja

course

be sp

OF THE	S.NO	NAME	DESIGNATION	SIGNATURE
ENGINEERING 12-2019 Board of Studies 12.2019 at hall. resent in	22.	Dr. P. Mohan	Member	
	23	Mr. S. Selvam	Member	
	24.	Mr. D. P. Sam Solomon	Member	
	25	Mr. P. Manivel	Member	
	26	Mr. R. Vishnu	Member	
	27	Mr. G. Balamurugan	Member	
	28	Mr. R. S. Mohankumar	Member	
	29	Mr. M. Muruganandam	Member	
	30	Mr. C. Manivannan	Member	
	SIGNATURE	31	Ms. P. Aruna Devi	Member
	32	Mr. H. Sivarathinamorthy	Member	
	33	Mr. S. Thirumurugan	Member	
	34	Mr. S. Vellingiri	Member	
	35	Mr. Tony Punnosevalayil	Member	
	36	Mr. S. K. Pradeep Mohan	Member	
	37	Dr. R. Sathiskumar	Member	
	38	Mr. S. Bravenkumar	Member	
	39	Mr. G. Ramkumar	Co-opted Member	

Dr. K. Marimuthu, Professor and Head of the Department of Mechanical Engineering welcomed the gathering and gave an outline on the agenda of meeting. The following were the salient points of discussion.

1. Dr. K. Marimuthu informed the members that it has been planned that the Mathematics course will be taught by the Faculty of our department as they would be able to teach the course oriented towards its application in Mechanical Engineering.
2. Er. Jayakumar suggested that apart from the English course and laboratory, a few more hours per week may be spent on improving communication skills as it is more

important with reference to their placements.

Dr. K. Marimuthu responded that the same will be covered under placement training activities.

3. Prof. T. Sundararajan enquired as how many students come under a batch in laboratories. Dr. K. Marimuthu replied that the batch is restricted to two or three students in laboratories and in case of laboratories involving computers, it is usually a student per computer.
4. Dr. V. Prabhuraja suggested that the course name "Fluid Machinery Lab or Electrical Machines & Embedded Processor Laboratory" shall be renamed as "Fluid Machinery / Electrical Machines & Embedded Processor Lab", as the word "or" may give a different meaning.
5. Dr. R. Saravanan insisted on naming the course in the curriculum instead of calling it a one credit course.
6. Dr. V. Prabhuraja enquired if the evaluation of laboratory is of semester pattern or yearly pattern. Dr. N. Rajam Ramaswamy clarified that the evaluation will be semester wise.
7. Dr. V. Prabhuraja also enquired if the students have to take up all the laboratories under elective lab. Dr. A. S. Krishnan clarified that the Programming lab is an elective lab and the students have to select one among the three.
8. Prof. T. Sundararajan observed that the fifth and sixth semesters are overloaded. He also added that the third and fourth semester loads are relatively lesser and some of the courses may be shifted there. Dr. V. Prabhuraja also agreed that the number of contact hours is 31 per week which is very high and suggested relocating some of the courses from the fifth and sixth semesters.
9. Prof. T. Sundararajan enquired as what is being done in

CAE a

Dr. A. S.

theore

10. Dr. R. S.

HSM: I

Dr. R. Sa

called

Clarifi

and h

suggest

Phase-II

11. Dr. R. S.

3rd or

12. Dr. K. Mo

kuman

an on

under

by the

13. Fr. Jaya

shall

a give

14. Prof. T. S.

Unit 5

instead

the es

Machin

15. Dr. V. Pr

need to

for Mer

16. Dr. R. So

Micro. P

Anchit

acements.

re will be
ities.

any students

Marimuthu

two or three

laboratories

sent per

we name

s & Embedded

l as "Fluid

Processor Lab",

meaning.

course in

one credit course.

f laboratory is

jam Ramaswamy

ster wise.

ents have to

ctive lab

aming lab is

select one

th and sixth

at the third

lesser and

r V Prabhuraja

hours is 31

ted relocating

th semesters.

eing done in

CAE and CAD/CAM as both the cases are same.

Dr. A.S. Krishnan clarified that the course CAE is theoretical whereas CAD/CAM is a laboratory course.

10. Dr. R. Saravanan enquired as why CAE is placed under HSM. Dr. A.S. Krishnan clarified that the same has to be FCC.

Dr. R. Saravanan also enquired if Project should be explicitly called Phase-I and Phase-II. Dr. N. Rajam Ramaswamy clarified that the evaluation is done in each semester and hence being called explicitly. Prof. T. Sundararajan suggested that Phase-I could be a design phase and Phase-II could be a fabrication phase.

11. Dr. R. Saravanan suggested shifting elective lab to the 3rd or 4th semester.

12. Dr. K. Marimuthu informed the Board that Mr. A.S. Shiva kumaran, KOSO India Pvt. Ltd., has come forward to offer an one credit course on "Foundry Practise and Procedure" under R2015 Regulations and the same was approved by the board.

13. Er. Jayakumar suggested that at least one experiment shall be given wherein software has to be used to solve a given problem under Fluid Machinery Lab.

14. Prof. T. Sundararajan suggested renaming the title of Unit 5 in Fluid Mechanics as "Hydraulic Machinery" instead of Fluid Machinery. Dr. V. Prabhuraja suggested renaming the entire course as "Fluid Mechanics and Hydraulic Machinery".

15. Dr. V. Prabhuraja also pointed out that unit wise titles need to be given for the course "Engineering Mechanics for Mechanical Engineers".

16. Dr. R. Saravanan suggested including contents on Micro-Processors in the course "Embedded Processor and Architecture". Er. Jayakumar added that the content on

- Logic Gates should also be studied by students as it is very important.
17. Dr. R. Saravanan pointed out that five books have been suggested under Text Books for "Engineering Thermodynamics" course and added that two books were sufficient.
18. Prof. T. Sundararajan suggested adding a few lecture hours on introduction to turbines in Applied Thermodynamics which can be descriptive rather than being mathematical. Dr. A. S. Krishnan also clarified that a separate course on "Turbomachinery" is also being offered as elective.
19. Prof. T. Sundararajan also suggested adding a couple of lectures on "Types of columns, Buckling" under the course "Strength of Materials".
20. Dr. V. Prabhu Raja suggested renaming the title of unit 1 in "Mechanisms of Machines" as "Fundamentals of Mechanisms". He also pointed out that the contents on "Dynamic Analysis" is missing. Dr. N. Rajam Ramaswamy responded that the same will be added.
21. Er. Jayakumar and Dr. T. Sridhar added that the contents on "Strain Gauge" shall be explicitly added in Unit 1 of "Instrumentation and Control Systems" course. Dr. V. Prabhu Raja suggested renaming Unit 1 as "Sensors and Transducers". Dr. R. Saravanan renaming Unit 2 as "Signal Conditioning, Transmission and Control". He also suggested moving some of the sensors in Unit 3 to Unit 1.
22. Dr. T. Sridhar suggested adding a book by J. P. Holman under references. Dr. V. Prabhu Raja suggested renaming Unit 5 as "Introduction to Systems Engineering". Prof. T. Sundararajan enquired if Laplace Transforms is
23. Dr. V. P. He also system Unit-4
24. Dr. V. P. Mater Measur revise Elemen Creep.
25. Dr. K. M. units course
26. The m Graphs Mr. K. K. risers
27. Prof. T. on "Flu
28. Dr. V. P. and Te Dr. K. M. which
29. Dr. V. P. to be s suggesti Control suggest Control

y students

e books have

Engineering

hat two

few lecture

plied

e rather

n also

machinery"

ling a couple

under the

le of unit-1 in

of Mechanisms".

namic Analysis.

d that the

hat the

'y added in

vs" course.

.1 as

renaming

and Control".

sors in

J.P. Holman

d renaming

ing".

nsforms is

taught under this course. Dr N Rajam Ramaswamy clarified that Laplace Transforms is studied under Maths and only introduction is done under Instrumentation course

23. Dr. V. Prabhu Raja suggested renaming Unit-4 as Control Systems. He also added that "Control Systems - approach to physical systems" can be added as the first statement under Unit-4.

24. Dr. V. Prabhu Raja suggested renaming Unit-2 in Materials Engineering as "Mechanical Properties and Measurements" and he also added that Unit-3 has to be revised as its contents are repeated in Design of Machine Elements. Prof. T. Sundararajan also added that contents on Creep has to be added in the course.

25. Dr. K. Marimuthu suggested reducing the number of units to 5 and add some contents on Composites in the course.

26. The members decided to rename the course "Computer Graphics-I & II" as "Computer Aided Machine Drawing-I & II". Mr. K. Karthik suggested adding a part on design of patterns, risers and gates with allowances as an experiment.

27. Prof. T. Sundararajan suggested adding an experiment on "Flow Visualization" in Fluid Machinery Laboratory.

28. Dr. V. Prabhu Raja suggested renaming "Material Characterization and Testing Laboratory" as "Material Testing Laboratory". Dr. K. Marimuthu suggested adding an experiment on NDT which can be collaborated with industry.

29. Dr. V. Prabhu Raja insisted on naming the experiments 3 & 4 to be specific in Dynamics Laboratory. Dr. N. Rajam Ramaswamy suggested renaming experiment 2 in Instrumentation and Control Lab as "Modelling of a 2-Tank System". Dr. V. Prabhu Raja suggested renaming experiment 1 in Instrumentation and Control Lab.

30. Dr R. Saravanan suggested adding an experiment on "Emission Measurements" in Instrumentation Lab. Dr. M. Velliangiri responded that the same is given under Applied Thermodynamics laboratory.
31. Prof. T. Sundararajan suggested that the experiment on Flash and Fire point can be added up with determining the Calorific Value of fuel. He also insisted on adding "Introduction to Boiling and Condensation" in "Heat and Mass Transfer". Dr. R. Saravanan suggested combining Units 1 & 2 and condense Conduction into a single unit.
32. Dr. V. Prabhu Raja suggested renaming Unit-1 as "Design for Static and Variable loading" and Unit-5 as "Design of Springs and Flywheels" under the course Design of Machine Elements. He also suggested that under the unit "Design of bearings" the first phrase shall be slightly altered as Design of hydro-dynamic bearings, introduction to hydro-static bearings.
33. Dr. R. Saravanan suggested that the number of units may be reduced to 5 in Refrigeration and Air-Conditioning course. He also stressed that certain topics on heat load calculation in-door air quality can be added. He also suggested adding non-compression processes such as thermo-electric, electro-magnetic refrigeration. He also added that Unit 3 can be coupled with Unit 2 in R & AC.
34. Dr. V. Prabhu Raja suggested renaming a unit on Operations Research as "Inventory Models". Mr. A. S. Shivakumaran added that a book by Dharami Venkatakrishnan can be added under references.
35. Dr. V. Prabhu Raja also suggested renaming the units 2 & 3 in Finite Element Analysis as "1-D Static Structural Analysis" and "2D Static Structural Analysis". He also suggested

- renami
and b
Transp
36. Dr. K. Me
Additiv
the cou
Automa
37. Dr. N. Ra
in "Qu
Fr. Jaya
under
can a
38. A new
Mecha
regula
39. Prof. T. S
subject
from th
giving
topics c
use of
solve p
40. Dr. R. Sar
referen
semeste
quantit
being b
41. Mr. A. S.
signed
and co
42. Dr. V. Pro
emergi

experiment
 ntation Lab.
 ne is given
 ony.

e experiment
 p with
 He also insisted
 d Condensation"
 n suggested
 rduction into

t-1 as "Design
 it-5 as "Design
 e Design of
 under the
 shall be
 ic bearings,

of units may
 tioning course.
 load calculation
 ggested adding
 lectric,

that Unit 3

it on Operations
 umaran
 an can be

e units 2&3
 unctional Analysis"
 suggested

renaming the unit on Design of gears as "Design of spur, helical and bevel gears" under the course "Design of Mechanical Transmission Systems."

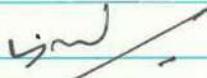
36. Dr. K. Marimuthu suggested renaming the title of Unit-1 as Additive Manufacturing instead of Rapid Prototyping under the course "Advanced Manufacturing Technology and Automation in Manufacturing"
37. Dr. N. Rajam Ramaswamy insisted on adding SQC and QAS in "Quality Engineering and Management" course. Fr. Jayakumar suggested adding Reliability and MTBF under the course. Mr. A.S. Shivakumaran said that 5S can also be included.
38. A new subject named "Micro and Nano Electro Mechanical Systems" was introduced under R2015 regulations and the same was approved by the Board.
39. Prof. T. Sundararajan pointed out that some of the subjects were overloaded and it requires a lot of effort from the faculty to manage the same. He also insisted on giving emphasize to the basic concepts and the advanced topics can just be introduced. He also insisted on effective use of tutorial hours where students can be asked to solve problems on the black board.
40. Dr. R. Saravanan insisted on balancing the load with reference to difficulty level of the subjects learnt in a single semester. He added that a mix up of theory and quantitative subjects can help the students learn without being burdened heavily.
41. Mr. A.S. Shivakumaran insisted on effectively using MoU's signed with the industries. He suggested further interactions and connectivity with industries.
42. Dr. V. Prabhuraja suggested adding a few more courses on emerging technologies. He suggested that the contents of

the syllabus can be cross-checked with GATE syllabus. He added that GATE coaching can be an integral part of class room teaching.

43. Er Jayakumar added that new technologies can be taught with the help of experts from industries for the betterment of students community.

44. Dr R. Saravanan added that as the electives list has been divided stream wise, the students can be motivated to select subjects from a particular stream per semester so that students can learn from all the streams.

Dr. K. Marimuthu proposed the Vote of Thanks and conveyed his thanks to the experts for their valuable suggestions. He also added that their suggestions will be incorporated depending on the feasibility and requirements.


Dr. K. MARIMUTHU, Ph.D.,
 PROFESSOR AND HEAD OF MECHANICAL ENGINEERING
 COIMBATORE INSTITUTE OF TECHNOLOGY
 COIMBATORE - 641 014, INDIA

1. Dr. K. M. ...
 (i) Dr. D.
 (ii) Dr. P.
 (iii) Dr. P.
 (iv) Mr. A.
 (v) Mr. V.

2. Dr. K. Marimuthu proposed the program time for two Master and Advanced called of Mechanical syllabi courses semester

3. Dr. A. S. K. for all

BC

T
in Mech
03:00 PM

I
Departm
gatheri
meetin
discuss

1. Dr. K. M. ...
 (i) Dr. D.
 (ii) Dr. P.
 (iii) Dr. P.
 (iv) Mr. A.
 (v) Mr. V.

and in
2. Dr. K. Mar
program
time pr
two Mas
and Adv
called
of Mecha
syllabi
courses
semester

3. Dr. A. S. K. for all