



#### MECHANICAL ENGINEERING DEPARTMENT

Dt.23.05.2022

To

Dr. K. Ramesh Kumar, Sc. G, DRDL, Director (Technical)- BRAHMOS Aerospace Limited, DRDL Campus, Kanchanbagh, Hyderabad-500058..

Respected Sir,

Sub: Board of Studies in Mechanical Engineering, CBIT (Autonomous) – convening the meeting of the Board of Studies in Mechanical Engineering on 28.05.2022 – Reg.

An online meeting of the Board of studies in Mechanical Engineering will be convened on Saturday, 28th May, 2022 at 10.00 a.m to discuss the following agenda.

#### **AGENDA**

- 1. To consider and approve the syllabus of B.E V,VI,VII&VIII Semester (Mechanical Engineering) under curriculum R-20.
- 2. To consider and approve revision of the scheme and syllabus of honors and minors degrees offered by department of Mechanical Engineering under curriculum R-20.
- 3. To consider and approve the open electives offered by Mechanical Engineering department to other department under curriculum R-20.
- 4. To consider and approve the replacement of workshop/ Manufacturing practice with digital manufacturing lab for the all the programmes offered by CBIT under R-20.
- 5. To consider and approve the introduction of the course robotics and drone building for all the programmes offered by the CBIT as part of I year curriculum under R-20
- 6. To consider and approve the syllabus of Service courses offered by Mechanical Engineering department to other departments
- 7. Any other item with the permission of the chair

I am hereby requesting you to kindly make it convenient to attend the on line meeting through zoom platform on Saturday, 28.05.2022 at 10.00 a.m. Link will be shared to your mail by 9.30 a.m on 28.05.2022.

Dr. P.V.R.Ravindra Reddy Professor & Head, MED

Chairman - Board of Studies

# Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad-75 Department of Mechanical Engineering Minutes of BoS meeting held on 28.05.2022

A board of studies meeting was conducted on 28.05.2022 from 10.30 A.M to 2.00 P.M through on-line mode using Zoom platform. The minutes of the meeting are as follows:

### Members Present.

- 1. Dr. P. Lakshmi Narayana, Professor, OUCE
- 2. Dr.N.Venkata Reddy, Professor, IITH
- 3. Dr.Y.Ravi Kumar, Assoc.Professor, NITW
- 4. Dr.M.Chandra Sekhar Reddy, Professor, OUCE
- 5. Dr. C. Satyanarayana Raju, SC.G, DRDL
- 6. Dr.S.Satyanarayana, Director, A.P.LMEC systems
- 7. Sri T.Madhusudhan, Engineer, BDL
- 8. Dr. P.Chandrasekhar, Technical Director, Technical Director, Tecniq Design Group
- 9. Prof. P. Ravinder Reddy, CBIT
- 10. Prof. G. Chandra Mohan Reddy, CBIT
- 11. Prof. .MVS Murali Krishna, CBIT
- 12. Prof. P.V.R. Ravindra Reddy, Chairman-BOS, MED, CBIT
- 13. Prof. N.V. Srinivasulu, CBIT
- 14. Prof. P. Prabhakar Reddy, Professor, CBIT
- 15. Prof. G. Laxmaiah, CBIT
- 16. Dr. T. Ratna Reddy, Associate Professor, CBIT
- 17. Dr. R.P. Chowdary, Associate, Professor
- 18. Dr. K. Kishor, Assoc. Professor, CBIT
- 19. Dr.V.V.R. Seshagiri Rao, Assoc.Professor, CBIT
- 20. Dr.S.Soloman Raj, Associate Professor, CBIT
- 21. Dr Aleem Pasha, Associate Professor, CBIT
- 22. Dr.B.V.S.Rao Assistant professor, CBIT

## Leave of Absence

- 1. Dr. K. Ramesh Kumar, Scientist G, DRDL
- 2. Sri V.R.Sunil Kumar, Director, Ramtec Industries

# Agenda Item 1: To consider and approve the syllabus of B.E V,VI,VII&VIII Semester (Mechanical Engineering) under curriculum R-20.

Chairman BoS welcomed the members and started the meeting with the presentation of major changes in the syllabus revision. He informed the members that (i) Feedback on the curriculum is taken from the stake holders (ii) mapping of the courses and the syllabus of each course are carried with NIT- Warangal, OUCE and VIT Vellore. The deviations were discussed in the CEG, PAQIC & department meetings and the scheme & syllabus are finalized. The flowing decisions were taken.

- In CAD/CAM theory course (20MEC19), slicing aspects of 3D printing may be introduced as it is the need of the hour.
- The programme elective, Additive Manufacturing (20MEE06) should be shifted to VI semester as it is better to study the course CAD/CAM that is offered in V semester i.e the course CAD/CAM should be made prerequisite for the course Additive Manufacturing. The topics ASTM-7 classification, rapid tooling, binder jetting, DMD, spray are techniques may be added to the course. The syllabus may be reorganized such a way that design aspects may taught prior to the processes.
- In the programme elective course, Product design and Process Planning (20MEE08)
  market research may added prior to the product development in Unit-1 and some topics
  related innovation, incubation and startups may added in the V unit.
- In the practical course, CAD/CAM lab (20ME C22) the terminology in the 14th experiment is ambiguous, hence, should be reframed. 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> experiments should be combined. Experiments related to MATLAB code for transformations, spline curve, Basier curve etc. may be introduced. In the CAD lab the focus may be on MATLAB coding rather than working on tools and features.
- In the course Metrology and Instrumentation (20MEC23) the topic, 3D coordinate measuring machine may be added
- In the course Thermal Turbomachines (20MEC25), different types of Nozzles, Static
  pressure and dynamic Pressure concepts useful for musical fountain industry are to be
  added as the industry is growing rapidly.
- In the course Finite Element Analysis (20MEC26) the topics like solving partial differential equations with Galarkin method etc. minimizing residue in FEM may be added.
- In the course Robotic Engineering (20MEE10) the topic Animatronics may be added as infotainment industry is undergoing rapid growth. Micro controllers to control Servomotor to be included in unit-III

- In the course Industrial Safety and Maintenance (20MEE12) the book by H P Garg may be replaced with another book as it is very old edition. Books on proactive maintenance may be added.
- In the course Metrology and Instrumentation lab (20MEC28) an experiment related to 3D scanning may be introduced. For the experiments like roundness, flatness measurements the point data from the 3D scanner may be taken, the measurement can be done using Matlab code and same may be compared with the conventional measurement.
- Computer Aided Engineering Lab (20MEC32) contains exercises related to finite element analysis only. So the name of the lab may changed to Finite Element Analysis lab.
- In the course Automobile Engineering (20MEE13) electrical vehicle charging may be added.
- In the course Mechanical Vibrations (20MEE15) end applications such as health monitoring system etc may be added.
- In the course supply chain management (20MEE16) the syllabus may reframed so that the concepts are taught after design aspects
- In the course Renewable Energy Systems (20MEE17) Various components of a Solar Powered System may be added.

Agenda Item 2: To consider and approve revision of the scheme and syllabus of honors and minors degrees offered by department of Mechanical Engineering under curriculum R-20.

 Chairman BoS informed the committee that there is no change of content in any course except the change of code numbering system. The same was approved by the committee

Agenda Item 3: To consider and approve the open electives offered by Mechanical Engineering department to other departments under curriculum R-20.

 The title of the open course Robotics (20ME O01) may be changed to Mechanisms and Robot Kinematics

Agenda Item 3: To consider and approve the replacement of workshop/ Manufacturing practice with digital manufacturing lab for the all the programmes offered by CBIT under R-20.

Approved without any modifications

Agenda Item 4: To consider and approve the introduction of the course robotics and drone building for all the programmes offered by the CBIT as part of I year curriculum under R-20

Approved without any modifications

Agenda Item 5: To consider and approve the syllabus of Service courses offered by Mechanical Engineering department to other departments

Approved without any modifications

Agenda Item 6: Any other item with the permission of the chair

As there is no other item to discuss the meeting is closed with vote of thanks

Chairman, BoS

PROFESSOR & HEAD

Department of Mechanical Engineering Chaitanya Bharathi Institute of Technology (A) Gandipet, Hyderabad-500 075. Telangana