

MAHENDRA ENGINEERING COLLEGE

*(An Autonomous Institution, affiliated to Anna University Chennai and
Accredited by NAAC with 'A' Grade & NBA Tier-I (WA) UG : CSE, ECE, EEE)
Namakkal-637503, Tamilnadu*

10th Board of Studies Meeting



DEPARTMENT OF AERONAUTICAL ENGINEERING Minutes of Meeting

Period – 29th April 2023



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Mahendhirapuri, Mallasamudram, Namakkal Dt. - 637 503.



DEPARTMENT OF AERONAUTICAL ENGINEERING

MINUTES OF BOARD OF STUDIES MEETING

Date: 29.04.2023

The 10th Board of Studies meeting for B.E Aeronautical Engineering was held on 29.04.2023 from 10.30 A.M. at Ramakrishnar Arangam.

Agenda of the Meeting:

- i. Review of previous Board of Studies Meeting held on 20.04.2022
- ii. To discuss and approve the revision / amendment, in the curriculum / syllabi (3rd & 4th semester) of Regulation 2022 of Aeronautical Engineering
- iii. To discuss and approve the Curriculum/syllabi (5th to 8th semester) of Regulation 2022 of Aeronautical Engineering
- iv. To discuss Innovation in Teaching & Evaluation Techniques
- v. To discuss and introduce BE Honors degree
- vi. To discuss and approve the Value Added Courses (VAC)
- vii. To approve the panel of external faculty members identified for appointment of various examination activities
- viii. Any other point with the permission of Chairperson.

The following Board of Studies members were present :

1. **Dr.C.Dhavamani** , Head of the Department , Aeronautical Engineering, Mahendra Engineering College - **BoS Chairperson**
2. **Dr.G.Suresh Kannan**, Associate professor, Department of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore - **Anna University Nominee**
3. **Dr.P.Parthiban**, Professor, Department of Production Engineering, NIT Trichy - **Subject Expert**
4. **Dr.K.Suresh**, Manager (Stress Group), Aircraft Research and Design Center, H.A.L., Bangalore - **Subject Expert.**
5. **Shri.T.K.Sundaramurthy**, Former Scientist, Mission Director for Indian Communication & amp, Meteorological Satellite System, Bangalore - **Industry Expert**
6. **Mr.A.Vijesh Kumar**, Business Manager - Training Services, Harita Techserv Limited, Coimbatore – 641004.- **Industry Expert**
7. **Dr.K. Rajkumar**, Professor & Head of the Department, Mechanical Engineering, Mahendra Institute of Technology, Namakkal-Academic Expert.
8. **Dr.V.Shanmugam**, Dean, School of Mechanical Sciences, Mechanical Engineering , Mahendra Engineering College, Namakkal - **Member (Allied Department)**
9. **Dr.D.Subramaniam**, Professor, Aerospace Engineering, Mahendra Engineering College, Namakkal – **Member (Allied Department)**
10. All Faculty Members of Aeronautical Engineering Department
 1. Mrs.G.Mohana Priya, AP/AERO
 2. Mr.K.Balakrishnan, AP/AERO
 3. Mr.S.Vinodh, AP/AERO
 4. Mr.P.Sivakumar, AP/AERO
 5. Mr.A.Santhanarajan, AP/AERO
 6. Mr.S.Haridarwin, AP/AERO
11. **Mr.N.M. Mohamed Fayas**, Aircraft System Designer, Safran Engineering Services, Bangalore- **Member (Alumni)**
12. **Mr.T.Jeeva**, Student, Aeronautical Engineering, Mahendra Engineering College – **Member (Present Final Year Student)**

The following points were discussed, deliberated:

1. Dr. C.Dhavamani, Chairperson of BOS started the meeting by welcoming and introducing the external members to the internal members and thanked them for accepting to become the members of BOS of Aeronautical Engineering.
2. The Chairperson reviewed the minutes of the previous BOS meeting which was conducted on 20th April 2022 and it was confirmed by all the BoS Members.
3. The Chairperson of BoS then put forward the Agenda of this meeting before the Board members.
4. The Chairperson made a brief presentation on the Curriculum of Regulation 2022 for the students of B.E-Aeronautical Engineering admitted in the academic year 2022-23. The presentation highlighted the most Emerging and Enduring Fields identified for Additional Training as well as the Professional Skill Sets required for the Aeronautical Engineering graduates to meet the global challenges in the next 10 to 20 years.
5. The presentation also featured the comparison of the proposed curriculum to that of the model curriculum proposed by All India Council for Technical Education.
6. Chairperson of the BoS then presented the proposed structure of the curriculum and detailed syllabus of Engineering Sciences, Professional Core, Professional Elective, Open Elective, Employability Enhancing course and Mandatory courses for the R-2022 to the members present and invited comments from the members.
7. All the BoS Members discussed and approved new courses as professional electives to be offered to UG programme under Regulations 2022.
 - Aircraft General Engineering and Maintenance Practices
 - Combustion in Aerospace Engineering
 - Automatic Control Systems
 - Theory of Elasticity
 - Introduction to Drones
 - Fatigue and Fracture Mechanics
 - Rapid Prototyping and Tooling
 - Introduction to Cryogenics
8. The BoS Members discussed and approved the revised content of the courses "Aircraft Propulsion, Rocket Propulsion, Composite Material and Structures, Avionics, Finite Element Method, Aircraft Design, Industrial Aerodynamics" under Regulations 2022 according to the present needs and current trends of industries.

9. The BoS Members discussed and approved the suggestions made by stakeholders to introduce one or two courses related to Design and Drone Technology. It was decided to introduce the laboratory "UAV Design and Aeromodelling Laboratory" as a new course in the curriculum under Regulations 2022.
10. The BoS Members discussed and approved the suggestions made by stakeholders to enrich the syllabus of the laboratory "Modelling and Simulation Laboratory" under Regulations 2022 according to the present needs and current trends of industries.
11. The BoS Members discussed and approved the Value added courses to be offered to UG Programme under Regulations 2022.
 - AE2301-Design of Automotive and Aerospace Components
 - AE2302- Drone Design & Fabrication
12. The BoS Members discussed and approved the courses to be offered for B.E.Honor Degree under Regulations 2022.
13. The Board members made the following suggestions to revise the contents of the syllabi:

Aircraft Materials:

- Dr.K.Suresh suggested that the topic in the materials of Unit-I, should include all the composites used in the Aircraft.
- Dr.G.Suresh Kannan suggested specifying the types of heat treatment process with their applications in Unit-II.
- Dr.P.Parthiban suggested to enrich the Course content of Unit-V, due to the fact that for basic design, they need a better material knowledge

Vibrations and Elements of Aeroelasticity:

- Dr.G.Suresh Kannan suggested to combine 3rd and 4th units as a single unit and introducing the topics related to Aeroelasticity as two units in the Syllabus.
- Dr.K.Suresh suggested to change the course title as "Structural Vibration & Aero elasticity".

Experimental Stress Analysis:

- Dr.P.Parthiban suggested some modifications in Unit V by including the vibration method as a major topic in the syllabus.
- Dr.K.Suresh suggested incorporating NDT and other flight testing methods in the syllabus.

Introduction to Cryogenics:

- Shri.T.K.Sundaramurthy suggested to change the course title of "Introduction to Cryogenics" as "Cryogenics Engineering"
- Shri.T.K.Sundaramurthy suggested to give more importance to other propellants and advanced propellant techniques.

14. Dr.V.Shanmugam suggested to change the course title of "Introduction to Drones" as "Drone Technology and Design"
15. Dr.S.Rajkumar suggested to change the course title of "Applications of heat Transfer in Aircraft" as "Heat Transfer in Aircraft" and also to enrich the syllabus of Unit V in terms of current applications.
16. Mr. Mohammed Fayas suggested introducing the course "Aircraft System and Instrumentation" as a core subject because there were huge opportunities available for our Aeronautical students in Aircraft Electrical Field as well as system and instrumentation.
17. All BoS members discussed and approved the panel members to be appointed as Examiners for various examination activities.
18. **Changes/Revision in Curriculum and Syllabus**
The changes/revision in curriculum and syllabi are provided in Annexure I.
19. **New Courses introduced**
The list of new courses introduced is provided in Annexure II.
20. Finally, **Dr.C.Dhavamani, Head of the Department, Aeronautical Engineering, Mahendra Engineering College**, thanked all the members for their valuable suggestions and support for the successful conduct of the BOS meeting.
21. The above discussed matters were recommended to the Academic Council for approval.


09/05/23
Convener

(Mrs.G.Mohana Priya)
Dept. of Aeronautical Engineering


09/05/2023
Chairperson

(Dr. C.Dhavamani)
Dept. of Aeronautical Engineering


Principal 09/05/23

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