



### DEPARTMENT OF AERONAUTICAL ENGINEERING

### MINUTES OF SIXTH BOARD OF STUDIES (BOS)

Date: 17th October 2021

Time: 12.15PM to 1.30PM

### Venue:

Department Meeting Room, ADCET, Ashta + Online Mode for External Members through Zoom Meeting (Meeting ID: 721 426 2449, Password: MrRejuR)

### Members of Board of Studies Present

S. No.	Name of the Member & Designation	Position
1	Dr. N. V. Raghavendra, HOD – Department of Aeronautical Engineering, ADCET, Ashta	Chairperson
2	Dr. Rajkumar S Pant, Professor, Department of Aerospace Engineering, IIT Bombay, Mumbai	Vice Chancellor Nominee
3	Dr. G. Naresh Kumar, Scientist – G, Directorate of Systems, DRDL, Hyderabad	Industry Representative
4	Mr. Reju R, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member Secretary
5	Mr. Yogesh B Kumbhar, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
6	Mr. Sanoj P Suresh, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
7	Mr. Noble Sharma, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
8	Mr. Oblisamy L, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
9	Mr. Sabarishwaran R, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
10	Mr. Ramesh M, Assistant Professor, Department of Aeronautical Engineering, ADCET, Ashta	Member
11	Mr. Vikas D Patil, Engineering Integrated Product Development, Infosys, Mysore	Alumni Representative

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Dr. N. V. Raghavendra, Chairperson (BoS) & HOD, Department of Aeronautical Engineering chaired the meeting and welcomed all the members to the sixth Board of Studies (BoS) meeting of the Department of Aeronautical Engineering, with the brief outline of agenda of the sixth BoS Meeting.

Item: 6 <sup>th</sup> BoS-1	Confirmation of Minutes of Meeting about 5 <sup>th</sup> BoS to note Action Taken
Note:	For Information of Academic Council

The Minutes of Meeting of 5<sup>th</sup> Meeting of Board of Studies held on 6<sup>th</sup> February 2020, was confirmed by all the members of the Board of Studies. The following is the summary of the discussion in the fifth Board of Studies.

- 1. Finalized TY courses, added with the self-learning course, Internships
- 2. 8th semester Self-learning course policy was disclosed
- 3. Finalized the list of Open Elective courses and Professional Elective courses
- 4. Program Specific Outcomes modified from three to two numbers
- Discussion on Autonomous curriculum results, Higher education, and placement analysis of AY 2019-2020 & 2020-2021.

	To discuss and finalize the detailed syllabus of B. Tech
Item: 6 <sup>th</sup> BoS-2	Aeronautical Engineering for the Academic Year 2022-2023 (176 Credits)
Note:	For Approval of Academic Council

The detailed course-wise syllabus of 1st revision of Final Year B.Tech. Aeronautical Engineering was presented by the Department Academic Coordinator - Mr. Reju. R - to the Board of Studies.

The BoS Members approved the contents of the following courses after the discussion and deliberations.

- 1AEPC401: Finite Element Methods
- 1AEPE403: Turbulence Modeling
- 1AEPE405: Theory of Elasticity (Spelling need to change Caps in title)
- 1AEPE406: Aircraft Rules and Regulations DGCA (CAR)
- 1AEPE408: Quality Engineering and Management
- 1AEPE410: Numerical Heat Transfer and Fluid Flow
- 1AEPE411: Experimental Stress Analysis (Spelling need to change Caps in title)
- 1AEPE413: Aircraft Engine Design

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- 1AEPE414: Product Life Cycle Management
- 1AEOE422: Aircraft General Engineering Maintenance
- 1AEOE423: Design of Fixed wing Unmanned Aerial Vehicles
- 1AEPR451: Project Phase I
- 1AEPC454: Finite Element Methods Laboratory
- 1AEPE452: Self-Learning Course (Supervised Learning)
- 1AEPE415: Nanomaterials and Nanotechnology
- 1AEPE416: Non-Destructive Testing
- 1AEPE420: Cryogenics
- 1AEPR453: Project Phase II

In respect of "1AEPC402: Aircraft Control Systems" - Dr. Rajkumar S Pant suggested to change the name as "Introduction to Control Systems" or "Control Theory". This course deals with basics of control theory. One more subject can be added in an elective list as "Aircraft Control Systems". Also Dr. Rajkumar S Pant suggested to remove prerequisite of Flight Dynamics for this course.

In respect of "1AEPE404: Avionics and Instrumentation" - Dr. Rajkumar S Pant suggested to change the name as "Avionics & Aircraft Systems", Dr. G. Naresh Kumar suggested to change name as "Avionics".

In respect of "1AEPE407: Design of Unmanned Aerial Systems" - Dr. Rajkumar S Pant suggested to change UAV as UAS.

In respect of "1AEPE409: Automobile and Industrial Aerodynamics" - Dr. Rajkumar S Pant suggested to add recent textbooks and reference books instead of old books in curriculum.

In respect of "1AEPE412: Airframe Maintenance and Repair" - Dr. Rajkumar S Pant suggested to change Unit -6 Syllabus.

In respect of "1AEOE421: Air Traffic Control and Airport Management" - Dr. Rajkumar S Pant suggested to change subject as "ATC & Airport Design".

In respect of 1AEHS407: Economics for Engineers - the title will be changed to "Project Management and Finance", and information will be updated in 7th BoS.

In respect of "1AEPE417: Probability and Statistics" - Dr. Rajkumar S Pant suggested that the course looks too basic in members point of view; so they suggested to change the course or remove it.

In respect of "1AEPE418: Airframe Maintenance and Repair" - Dr. Rajkumar S Pant

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suggested that the course content on Safety Practices is not related to the course title. Course contents need to be changed.

In respect of "1AEPE419: Lean Six Sigma for Aircraft Assembly" - Dr. Rajkumar S Pant suggested that the course content on Operations Research needs to be removed and content needs to be reframed; or the course may altogether be removed.

Item: 6 <sup>th</sup> BoS-3	Other Comments on Curriculum	
Note:	For Approval of Academic Council	

Dr. G. Naresh Kumar suggested to add "Multi-disciplinary Optimization" (MDO) in the curriculum, so that students gain knowledge of multi-disciplinary optimization and system engineering approach.

Dr. Rajkumar S Pant suggested to remove slender body theory, Unsteady and parameter estimation in LTA, instead of that, he suggested to add materials used in LTA.

Dr. Rajkumar S Pant suggested to change UAVs as UAS in "1AEOE314: Introduction to Unmanned Aerial Vehicles".

Dr. Rajkumar S Pant suggested replacing MATLAB in curriculum with open-source software (Sci-lab, XCOS, python), as students don't have unlimited access to the tools after the campus timing, which limits students' learning.

Dr. Rajkumar S Pant, Dr. G. Naresh Kumar suggested to add Introduction to Artificial Intelligence & Machine Learning (AI & ML) in professional elective or to conduct short-term development program on AI & ML for students.

Item: 6th BoS-4	To discuss and finalize the Honors and Minor Degree program on "Drone Design" and its curriculum
Note:	For Approval of Academic Council

Dr. Rajkumar S Pant, Vice Chancellor Nominee and Dr. G. Naresh Kumar, Industry Representative felt that the word "Drone" is not fully appropriate and can be replaced by UAV.

Dr. Rajkumar S Pant, Vice Chancellor Nominee suggested to remove "CAD" from the curriculum for the Honours/Minors program and to replace it with "Aircraft Design".

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Item: 6 <sup>th</sup> BoS-5	To discuss and finalize the revised course outcomes for curriculum – 170 credit (SY, TY & B.Tech.) and 192 credit (B.Tech.)	
Note:	For Information of Academic Council	

Dr. Rajkumar S Pant, Vice Chancellor Nominee and Dr. G. Naresh Kumar, Industry Representative did not make any comments and suggestions on the revised Course Outcomes. Dr. Rajkumar S Pant, Vice Chancellor Nominee and Dr. G. Naresh Kumar, Industry Representative informed that to go ahead with institute decisions.

Revised COs for SY(170), TY(170) and B.Tech (192) were accepted by the BOS.

Item: 6 <sup>th</sup> BoS-6	To discuss and analyze the Autonomous Results of the Academic Year 2020-2021
Note:	For Information of Academic Council

The Departmental Exam Coordinator, Mr. Sanoj P Suresh, made a presentation of the results of the Academic Year 2020-2021 before the members of BoS. The results were satisfactory.

	To discuss and analyze the placement and higher education statistics of Academic Year 2020-2021, Road map for placement and Higher Education in AY: 2021-2022
Note:	For Information of Academic Council

The Training and Placement Coordinator, Mr. Oblisamy L, presented the report of placement and Higher Education statistics of Academic Year 2020-2021, highlighting the On-campus and Off-campus placement drives and offers received by the students.

Key activities for the students regarding placements, Value Added courses, Mock Interviews, Programming Classes, Advanced Aptitude Classes, were highlighted before the BoS members.

Number of students qualified for GATE exam increased from previous year.

The meeting ended with the Vote of Thanks by Dr. N. V. Raghavendra, Chairperson (BoS) & HOD, Department of Aeronautical Engineering.

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