



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
DEPARTMENT OF AEROSPACE ENGINEERING

DATE:28/05/2022

BOS MEETING

AGENDA:

1.Modifications proposed for

2021 batch

2020 batch

2019 batch

2. Proposal of NEP Implementation

3.Discussions on students & faculty feedback on curriculum

Modifications proposed for 2021 Batch

- ✓ Syllabus modifications for Materials of Solids and Aircraft Structural Mechanics
- ✓ Merging manufacturing lab into composites lab and rename this as Materials & Manufacturing
- ✓ Moving Propulsion lab to 4th Semester from 5th Semester

Syllabus modifications for Materials of Solids and Aircraft Structural Mechanics

Merging manufacturing lab into composites lab and rename this as Materials & Manufacturing

Moving Propulsion lab to 4th Semester from the 5th Semester

Modifications proposed for 2020 Batch -5th Semester

Modifications proposed for 2019 Batch

- ✓ Introduction of New lab "Avionics Lab"
- ✓ Removing AI & ML lab
- ✓ Offering AI&ML in Aerospace (Including Lab) as an elective
- ✓ Offering Aerospace Technical Publication as an elective

NEP Implementation

- ✓ Offering Minor in Aerospace Engineering
- ✓ Subjects proposed
- ✓ Introduction to Aerospace Engineering, Aerodynamics, Aircraft Propulsion, Aircraft structures, Aircraft performance, Aircraft Systems and Instrumentation
- ✓ Offering verticals like Propulsion, Structures, Aerodynamics, Avionics, Systems Engineering
- ✓ Working on AR/VR lab & Drones Lab for skill development
- ✓ Discussion on multiple entry/exits, ABC
- ✓ Discussion on M.Tech in Defence Technology
- ✓ Discussion on value added courses (1 credit course in house & Industry) Training on CREO, Web design, IoT
- ✓ Discussion on the first-year course from Aerospace Engineering


Chairman
Dept of Aerospace Engineering
School of Engineering
Dayananda Sagar University
Kudlu Gate, Bengaluru



DAYANANDA SAGAR UNIVERSITY
DEPARTMENT OF AEROSPACE ENGINEERING

Students and faculties feedback report on Curriculum

- ✓ This report focuses on the opinion of the students and faculties about the curriculum and based on the feedback received mixed opinion ranged from average to excellent.
- ✓ The outcome is formulated according to curriculum covering the interdisciplinary topics, Current trends has been good.
- ✓ In terms of acquiring the employability and entrepreneurship skills has been marked as good.
- ✓ Courses related to project works to be introduced earlier than in 7th semester
- ✓ Courses that provides job opportunities to be introduced earlier
- ✓ The students aimed to be helpful to the society and human values and ethics in which the curriculum is practiced.
- ✓ It is always advisable that the curriculum mainly oriented towards the course outcome aiming towards the innovation, competitive exams, academic flexibility in academic framework.
- ✓ The feedback has been valued to improve to quality and advance the feedback.

Rana Kund

Chairman
Dept of Aerospace Engineering
School of Engineering
Dayananda Sagar University
Kudlu Gate, Bengaluru



DAYANANDA SAGAR UNIVERSITY

DEPARTMENT OF AEROSPACE ENGINEERING

Action taken report on feedback received from students and Faculty on the Curricula and syllabi

The summarized feedback on the Curricula and syllabi received during 2021-22 as listed below and the respective actions proposed for the same in various areas to be translated to changes in the curriculum (content) and pedagogy (delivery methods) to better meet the aspirations and expectations in line with the program outcomes. The points below were discussed **in BOS Meeting**

- I. There is a **need for professional electives** that match **industry expectations** to improve the employability. In particular, students expect to be ready for attending interviews with good overall understanding of current aerospace industry including the installation, maintenance and operational aspects of commercial aircraft. Keeping these in mind it is suggested that the **current elective on Technical Publication by Capgemini be moved from the 8th Semester to the 7th Semester**. Through this, the knowledge so acquired will be readily relevant to appear for core industry job positions.
- II. There was an opinion that a more **formal coverage of airworthiness** is needed with respect to understanding the different sections applicable and so forth. Towards this, it is proposed that the **coverage in the course designed by Capgemini be leveraged to bridge this gap**.
- III. Faculty felt that **Aircraft Design is a generic subject** that all our graduations would benefit from. In line with this thinking, it is proposed that Aircraft Design be moved from being a **7th Semester elective to become a 5th Semester Core Course**. By appreciating the nuances of how various mission profiles, aircraft configurations and design of systems are integrated,

the students will acquire a better overall understanding of the application of the core subjects being covered.

- IV. Based on the trends of mini projects, it was noticed that many opportunities are emerging in areas that draw upon a preliminary understanding of avionics. Many students are choosing to execute projects involving a good amount of electronics, controls, data acquisition, sensors and electrical and computational devices. Keeping this in mind, it is proposed to move the Avionics core course from 7th Semester to the 5th Semester itself so that they get a better practical knowledge of design and working such systems.
- V. The faculty felt that in current form the structures coverage has some repetitions in terms of the material properties, stress strain, Uniaxial tension test etc. At the same time, there is an opportunity to provide better coverage in some topics like combined loading situation. With these in mind, it is proposed to revise the syllabi of structural courses in the 3rd and 4th Semester to address these gaps.
- VI. There is a need to have more choice-based electives and flexible learning. With this in mind, it is proposed to have NPTEL based electives as an option available to students not just in the final year, but from the earlier semesters as well.

Rama Kumar
Chairman

Department of Aerospace Engineering

Chairman
Dept of Aerospace Engineering
School of Engineering
Dayananda Sagar University
Kudlu Gate, Bengaluru

Forwarded to BOS for further discussions on the upcoming meeting



DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING

BOS - Minutes of Meeting

28/05/2022

- Manufacturing lab is made a part of Composite lab where 3-d printing will be introduced.
- Members suggested to include metal 3d printing as a part of the syllabus or the department should plan an industrial visit to NAL composite section or other composite industries to enhance student's knowledge.
- Basics of Material Properties should be included in mechanics of solids
- **Composite theories of Failure** should be introduced in the syllabus of Aerospace Materials.
- Discussions on **Tech pub Syllabus** and the percentage of **airworthiness concept in each module**
- **Airworthiness** can also be introduced as an elective course.
- Discussion made on introduction of Propulsion lab to IV semester and Avionics (lab and theory course) to V semester students of 2020 batch
- As a part of Avionics lab satellite communication systems can be upgraded to communicate with a real time satellite
- Principles of Management and Economics course will be introduced in VII semester for 2020 batch students
- Avionics lab is introduced to VII semester students (2019batch) in place of AI & ML lab
- Second module of Aircraft Systems and Instrumentation can be considered for Aircraft Design

- Research Methodology can be floated as an elective since it will be helpful for students aspiring for Higher education
- General name can be considered for the M. Tech program on Defence and Technology
- Electives on specific vertical will make students to get specialized in his/her field of interest
- Discussions on **Drone and AR VR labs**
- Approval of Introduction of Space Technology syllabus
- Proposed syllabus on Orbital Mechanics should be compared with other curriculum of other universities
- Discussion on the feedback received from the students and faculties regarding the syllabus
- **National Education Policy and its benefits were discussed**

Sl. No	Name of member	Designation	Signature
1.	Dr. B V N Ramakumar	Professor & Chairman – AE	Rama kumar 28/5/2022
2.	Dr. Ramachandra	External Member, NDRF	Ramachandra 28/5/22
3.	Dr. Balamurugan - G	External Member - NAL	Balamurugan 28/5/22
4.	Dr. Sivakumar	External Member – IISC	Sivakumar = 28/05/22
5.	Dr. Suryanarayana G K	Professor	GK 28/5/22
6.	Dr. Sharatkumar Variyar	Associate Professor	Variyar S.M. 28/5/22
7.	Mr. Srinath R	Assistant Professor	Srinath R 28/05/22
8.	Mr. Kartik S Tandel	Assistant Professor	Kartik S 28/05/22
9.	Ms. Krishnam Suhrutha	Assistant Professor	Suhrutha K 28/05/22