



Bharath

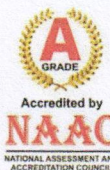
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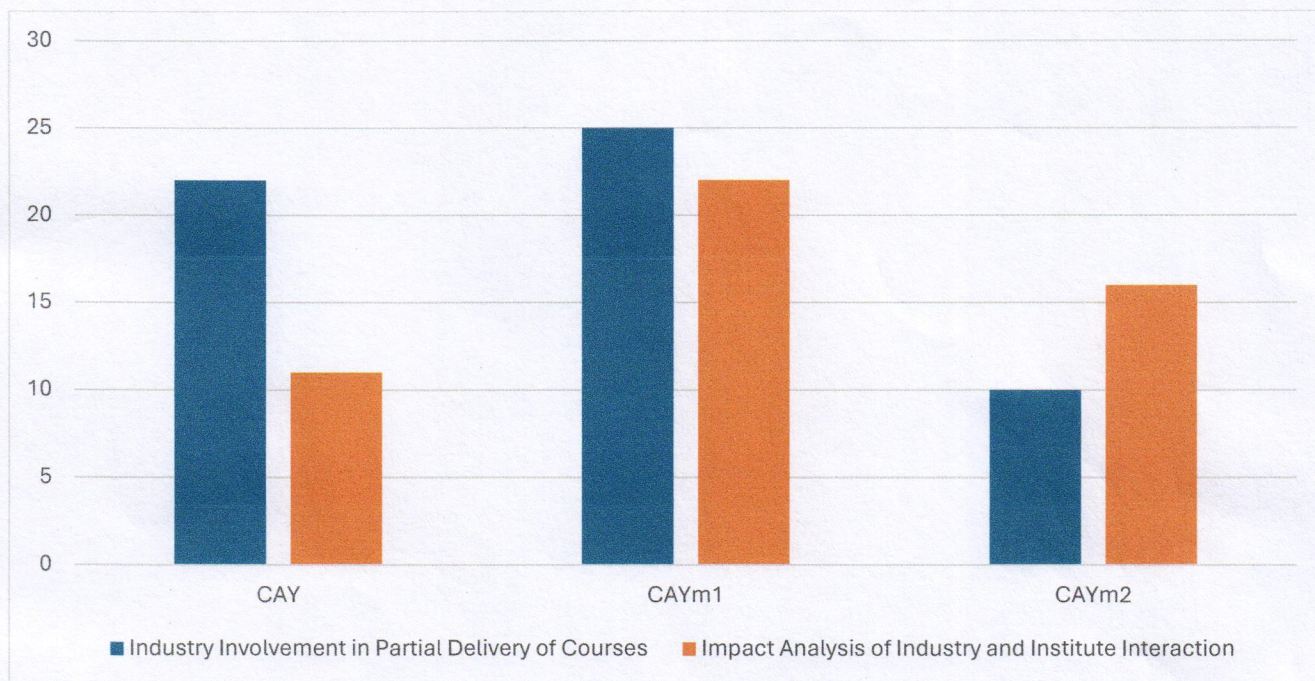
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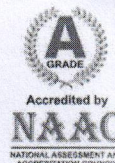
Sl.no.	CONTENT	CAY	CAYm1	CAYm2
1.	Industry Involvement in Partial Delivery of Courses	12	20	12
2.	Impact Analysis of Industry Institute Interaction	11	22	16



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1. Industry Involvement in the Program Design And Curriculum

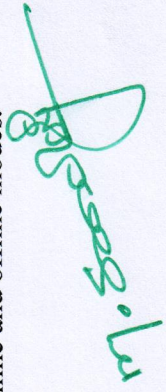
The design of curriculum and syllabi, derives the inputs from various industrial experts.

The following experts from industry are part of Board of Studies involved in Curriculum and Syllabi design

S.No	Name/ Designation	Specialization	Role
1	Dr.S.Selvi Rajan. Chief Scientist and Head Wind Engineering Laboratory, CSIR-SERC Taramani, Chennai-113	Structures, Aerodynamics and Aeroelasticity	Expert Member
2	Dr.S.Ganesan Scientist-F,CFD Group Gas Turbine Research Esta.(GTRE) DRDO, Ministry of Defence, C.V. Raman Nagar, Bangalore.	Propulsion and CFD	Expert Member
3	Dr.R.Kalimuthu, Engineer-SG ISRO, Propulsion Complex, ITRC Mahendragiri	Propulsion	Expert Member
4	Dr.V.Raghavan, Professor, Department of Mechanical Engineering, IIT Madras	Propulsion	Expert Member

2. Industry Involvement in Partial Delivery of Course

To promote Industry – Institute interaction and to increase student exposure to the industry environment, the following programs are being conducted: Guest lectures are conducted with experts from various institutes and organizations across India via online and offline modes.





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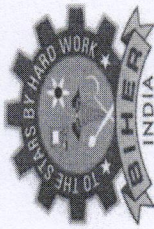
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S. No.	Date	Topic	Speaker & Organization	Subject Name/Subject Code	Target CO	Target PSO1	Target PSO2	Remarks
1.	07/10/2020	Indian Space Program – Present & Future	Mr.T.K.Sundaramurthy, Ex-Mission Director, ISRO Satellite Center, Bangalore.	U18PCAS301- Introduction to Aerospace Engineering	5	-	✓	Partial Deliver Of Course
2.	15/10/2020	Launching of a Nano-Satellite	Dr. Vinod Agarwal Ex-Mission Director, ISRO Satellite Center, Bangalore	U18PEAS011- Space mission design analysis	4	-	✓	Partial Deliver Of Course
3.	17/10/2020	An Introduction to Missile Aerodynamics	Dr. Krishnamohan Rao, Head, Aerodynamics Division, DRDL, Hyderabad	U18PCAS503- Rocket Propulsion	5	✓	-	Partial Deliver Of Course
4.	17/10/2020	Basics of Flight Testing & Flight Testing Techniques	Gp. Capt. A AruchaleswaranFlight Test Engineer, NPTC, ADA	U18PCAS504-Aircraft Performance	-	✓	-	Content Beyond Syllabus



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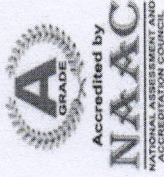
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5.	03/11/2020	Basic Introduction on Open Foam for Beginners	Mr. C Venkatesh CFD Consulting Engineer, Japan	Common to All	-	✓	-	-
6.	07/11/2020	Challenges in Tejas (LCA) Flight Control Design, Development & Testing	Dr Vijay Vinayak Patel Outstanding Scientist, CLAW, ADA, Bangalore	U18PCAS505-Aircraft stability and control	1,2	✓	-	Partial Deliver Of Course
7.	20/02/2021	Redefining my Aviation Dream	Mr. Naresh S Solipur, M/s Ziegler Aerospace, Chennai	Common to All	-	-	-	-
8.	08/03/2021	Airworthiness-Aircraft type Certification Process	Ms. Ramya Rajendran, Alstom UK, Derby	U18EEAS6L1-Aircraft Design Project	-	-	-	Content Beyond Syllabus
9.	26/03/2021	Solar Powered Airships	Dr. Rajkumar S. Pant, IIT Madras	U18PEAS023- Electric propulsion	1	✓	-	Partial Deliver Of Course



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10.	27/03/2021	Gas Dynamics & High Temperature Gas Dynamics	Dr. Muruganandam TM, IIT-Madras	U18PCAS402- Aerodynamics	4,5	-	-	Partial Deliver Of Course
11.	08/04/2021	Opportunity for higher studies in Aerospace at UK & Ireland & tips for IELTS preparation	Mr.Ranjit Mahendran, Fateh Edn. Consultancy, Chennai	Common to All	-	✓	✓	-
12.	15/05/2021	Role of Leadership in Marketing	Mr. Thyagavel.V, Manatec Electronics Pvt Ltd., Puducherry	Common to all	-	-	-	-
13.	02/06/2021	CFD: Approach, application and future prospects	Dr. Brajesh Tripathi, Rajasthan Technical University, Kota	U18PEAS044- High Temperature gas dynamics	4	✓	-	Partial Deliver Of Course
14.	07/06/2021	Skill Development: Learning Quadcopter Controls and Robotics	1. Dr.K.Sidhardha 2. Mr. Ankit Jaiswal, Q Wings, Dehradun, Uttarakhand	U18PCAS701-Guidance and control	5	✓	-	Partial Deliver Of Course



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15.	09/06/2021	Fundamentals of Combustion and Propulsion Systems	Dr. Arun Balakrishnan, Waterloo, Iowa, USA	U18PCAS503- Propulsion	Rocket	5	✓	-	Partial Deliver Of Course
16.	10/06/2021	Product Design Based on Computer aided Engineering Techniques	Mr. Thillai Lakshmi Venkatesh, TATA Aerospace and Defence Pvt Ltd, Bengaluru	U18PCAS7L1-Satellite design laboratory		2	✓	-	Partial Deliver Of Course
17.	11/06/2021	Fundamentals of Constitution of India	Mr. Saleem Ahmad, Bharath LAW college	Common to all		-	-	-	-
18.	11/06/2021	Bioinspired Aerodynamics	Dr. D.J. Bruce Ralphin Rose, Anna University, Tirunelveli	U18PCAS504-Aircraft Performance		1	✓	-	Partial Deliver Of Course
19.	12/06/2021	Critical Systems of Launch Vehicles and satellites	Mr. Sumod Kurup, AADYAH Aerospace Pvt Ltd., Bengaluru	U18PEAS013- Launch vehicle Aerodynamics		1	-	✓	✓



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20.	04/08/2021	Computational Fluid Dynamics and it's Industrial Application	Mr. Raju Govindharajan, Global Nodes Engineering Solutions Pvt. Ltd., Chennai	U18PCAS502-Compressible flow	4	✓	-	Partial Deliver Of Course
21.	21/09/2021	Demonstration of Technical Engagements to solve Space problems	Mr. Dhanish Abdul Khader, SS Technologies, Bengaluru	U18PEAS015-Space flight mechanics	2	-	✓	Partial Deliver Of Course
22.	01/10/2021	IPR- Intellectual Property Rights	Mr. Arun Shourie Rajangam, Airbus, Germany	Common to All	-	-	-	-
23.	05/10/2021	NDE- Non-Destructive Evaluation	Mr. S.Dwarakanathan, Flowserve India Pvt Ltd, Chennai	U20ASCJ02-Fundamental of Aerospace structures	1	✓	-	Partial Deliver Of Course
24.	08/10/2021	Session on SIEMENS-NX Certification	Mr. Kiran Hebbar, KH Designs Pvt Ltd., Bangalore	U20ASCJ01-Fluid mechanics for Aerospace Engineering	5	✓	-	Partial Deliver Of Course
25.	11/10/2021	Space Exploration	Ms. Janet Ivey, Janet's Planet, USA	U20ASCT06-Spacecraft Communication	2	-	✓	Partial Deliver Of Course

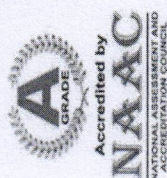


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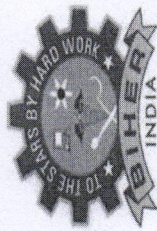
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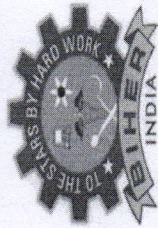
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29.	24/12/2021	GATE preparation for Aero students	Mr. Hero Hemaraj, JNF Academy, Bangalore	Common to All	-	✓	✓	-
30.	07/01/2022	Aviation Safety Management- A Manager's Perspective	Mr. V.Ravi, Bluedart Aviation Ltd., Chennai	Common to All	-	-	-	-
31.	11/01/2022	Understanding of Rotor Dynamics	Mr. Vijay Kumar Jain, Turbo Tech India Pvt Ltd., Bangalore	U20ASCJ04- Advance Aerospace Structures	2	-	✓	Partial Deliver Of Course
32.	12/02/2022	Electric Vehicle Technology	Dr. Ashok Aseri, AeSI, Bangalore Branch	U18PEAS023- Electric Propulsion	4,5	✓	-	Partial Deliver Of Course
33.	14/03/2022	Open Foam – An Overview	Dr. Dominic Chandar, Queen's University, Belfast, UK	U18PCAS6L1-Computer Aided Analysis Laboratory	2	✓	-	Partial Deliver Of Course
34.	29/04/2022	Latest Trends and Opportunities in Aeronautical Industries using CAD/CAM/CAE/	Mr. PG Ramanan, CADDAM Technologies Pvt. Ltd., Chennai,	U18PLAS6L1- Computer Aided Analysis Laboratory	3	✓	-	Partial Deliver Of Course



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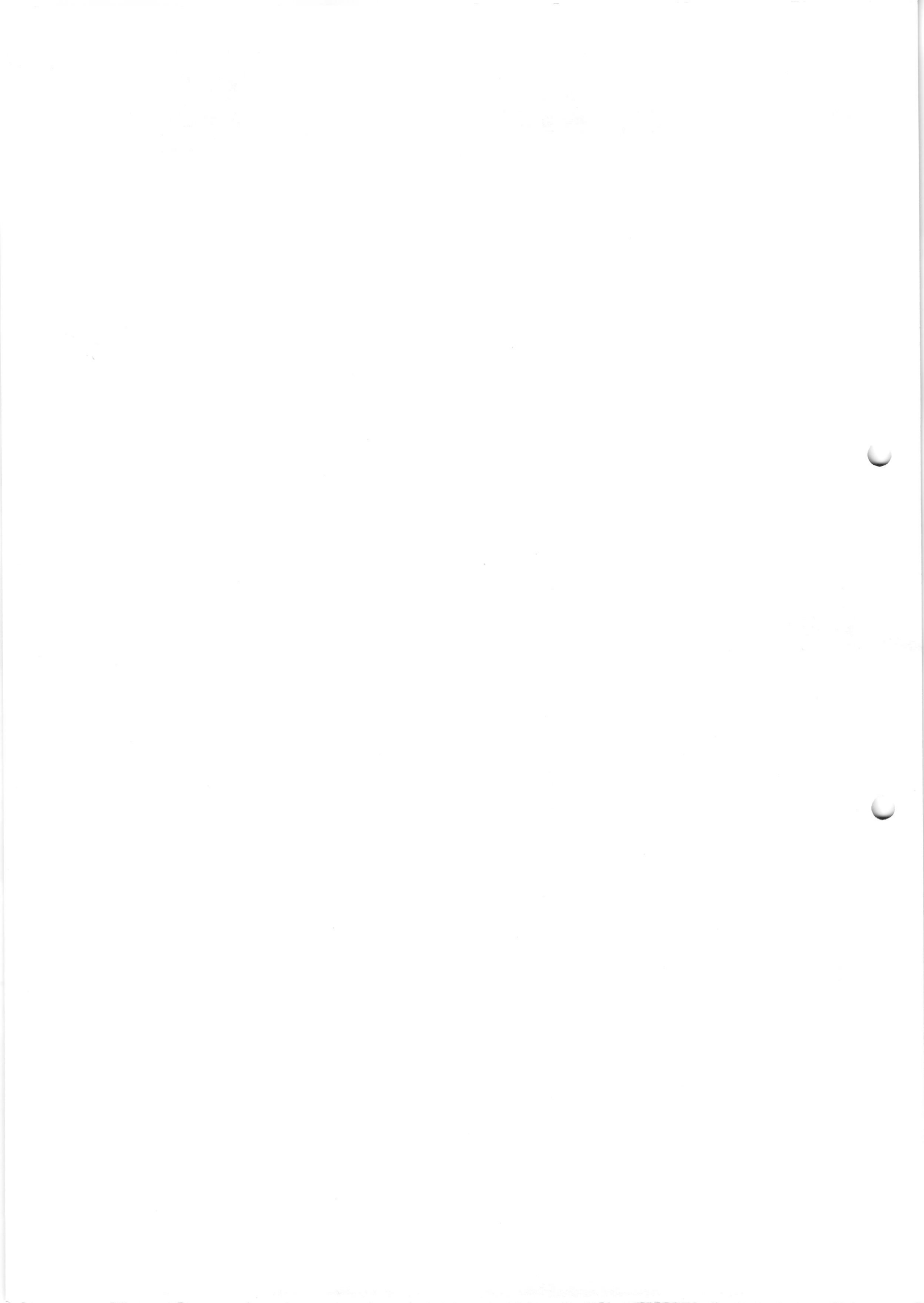
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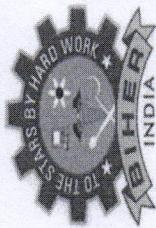
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	CFD and 3D Printing									
35.	06/05/2022	Introduction to NDT and its Applications	Mr. Abdul Jabbar, VBS NEST Academy, Chennai	U18PCAS405- Manufacturing technology	3	✓	-	Partial Deliver Of Course		
36.	25/05/2022	Introduction to Helicopter Aerodynamics	Dr. R.Sannathi Muthu, Hindustan Aeronautics Ltd. (HAL), Bengaluru	Common to All	-	✓	-	-		
37.	01/06/2022	Indian Patent Rights	1. Mr. S.Thangapandian, Indian Patent office-Chennai Branch 2. Dr. Y Mohamed Sirajudeen, Vellore Institute of Technology (VIT)- Amaravati	Common to All	-	-	-	-		
38.	13/06/2022 to 15/06/2022	Short Term Course (3 days)	Mr. T.K. Sundaramurthy, ISRO Satellite Centre, Bengaluru	U20ASCT08- Orbital Mechanics	1,2,3	✓	✓	Partial Deliver Of Course		





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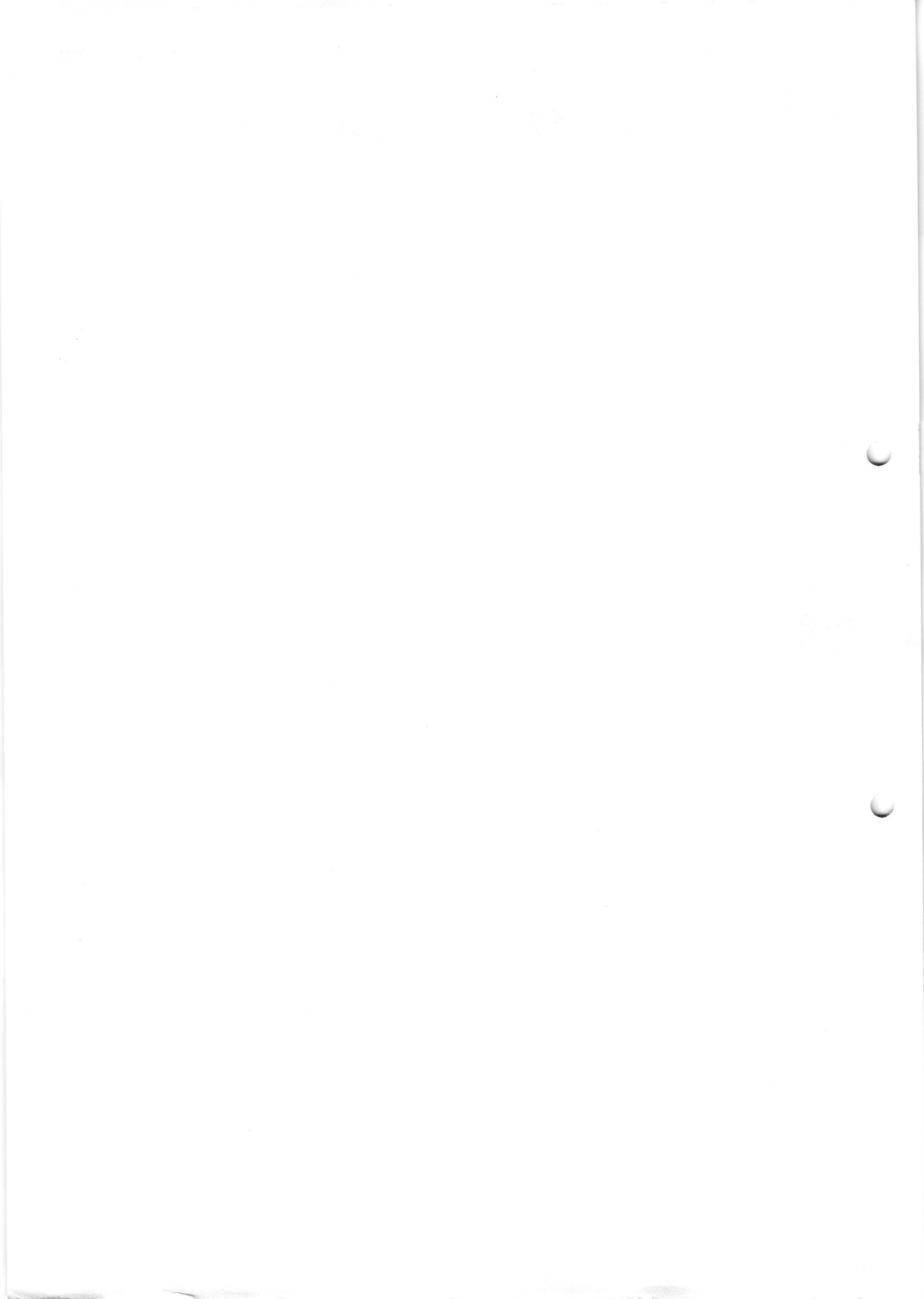
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39.	16/06/2022	Opportunity in MRO Sector	Mr. Arunachala Raam, AVVRRO Aviation Academy, Chennai	Common to All	-	-	-	-
40.	11/07/2022 to 13/07/2022	Short Term Course (3 days)	Dr. Surekha Rathi Samundi D, School of Aeronautical Engineering, BIHER	U20ASCJ03- Low and high speed Aerodynamics	1,2	✓	✓	Partial Deliver Of Course
41.	23/07/2022	Building CUBESAT	Mr. Aldrin Inbaraj A, Mr. Aldrin Inbaraj. A	U18PCAS702-Satellite Technology	2	✓	✓	Partial Deliver Of Course
42.	22/09/2022	Career in Product Development	Mr. Sujith Prabhakaran, CADD Centre, Chennai	Common to All	-	✓	-	-
43.	29/09/2022	International Education Opportunities at Australia, Canada, UK, USA, Ireland and Newzealand	1. Mr. Mohammed Adnan, Ms. Geetha Devi 2. Mr. Rajesh Ravichandran, IDP Education India Services LLP, Chennai	Common to All	-	✓	✓	-





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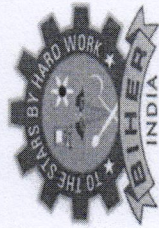
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44.	29/09/2022	Emphasis on Non-Technical Skills for Aircraft Engineers	Group Captain M.Murugan, Indian Air Force	Common to All	-	-	-	-	-
45.	19/10/2022	Application of Wind Energy	Dr. R.Kumaravel, Deutsche Windguard, Chennai	Common to All	-	-	-	-	-
46.	03/11/2022	Healthy Scholar	Mrs. N.Sudha Rajesswari, Trainer & Motivational Speaker, Chennai	Common to All	-	-	-	-	-
47.	30/11/2022	Latest Product Design Techniques using CAD/CAM/CAE/ 3D Printing in Aerospace Engineering	Mr. P.G.Ramanan, CADDAM Technologies Pvt. Ltd., Tamil Nadu	Common to All	-	✓	-	-	-
48.	12/12/2022	Prospectives in Indian Aviation Ecosystem	Mr. Vaibhav Varun, Aviakul Private Limited, New Delhi	Common to All	-	-	-	-	-



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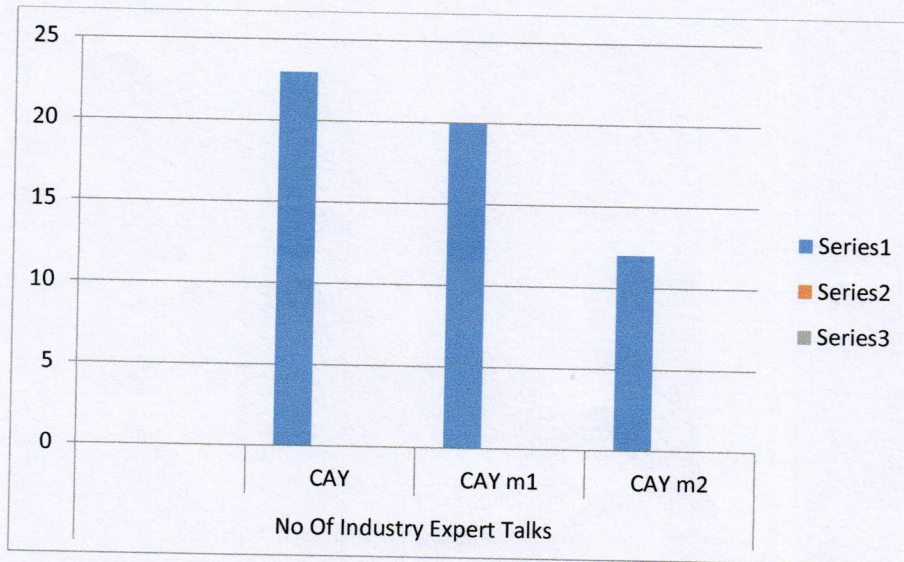
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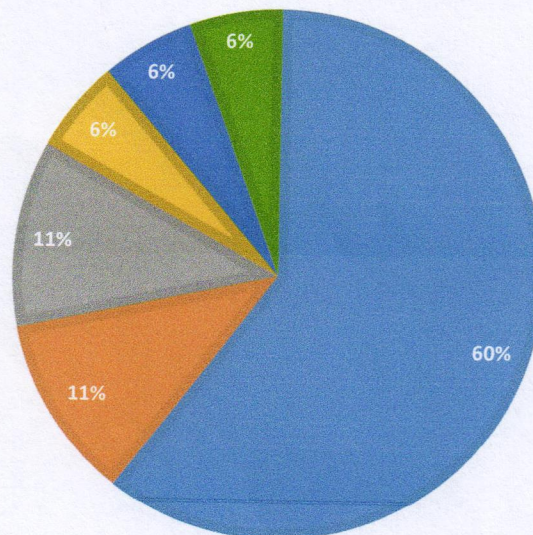
Parameters	No.of Events in CAY	No.of Events in CAY m1	No.of Events in CAY m2
Content beyond syllabus	0	1	2
Partial Delivery of Course	3	14	6
General	9	5	4

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AREA OF EXPERT TALKS

- Knowledge in Core Domain
- Product Design & Innovations
- Leadership & Skill Development
- GATE Preparation & Motivation
- Patent Drafting
- Higher Education & Career Opportunities



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DEPARTMENT OF THE ARMY
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3. MOUs Made over last three years:

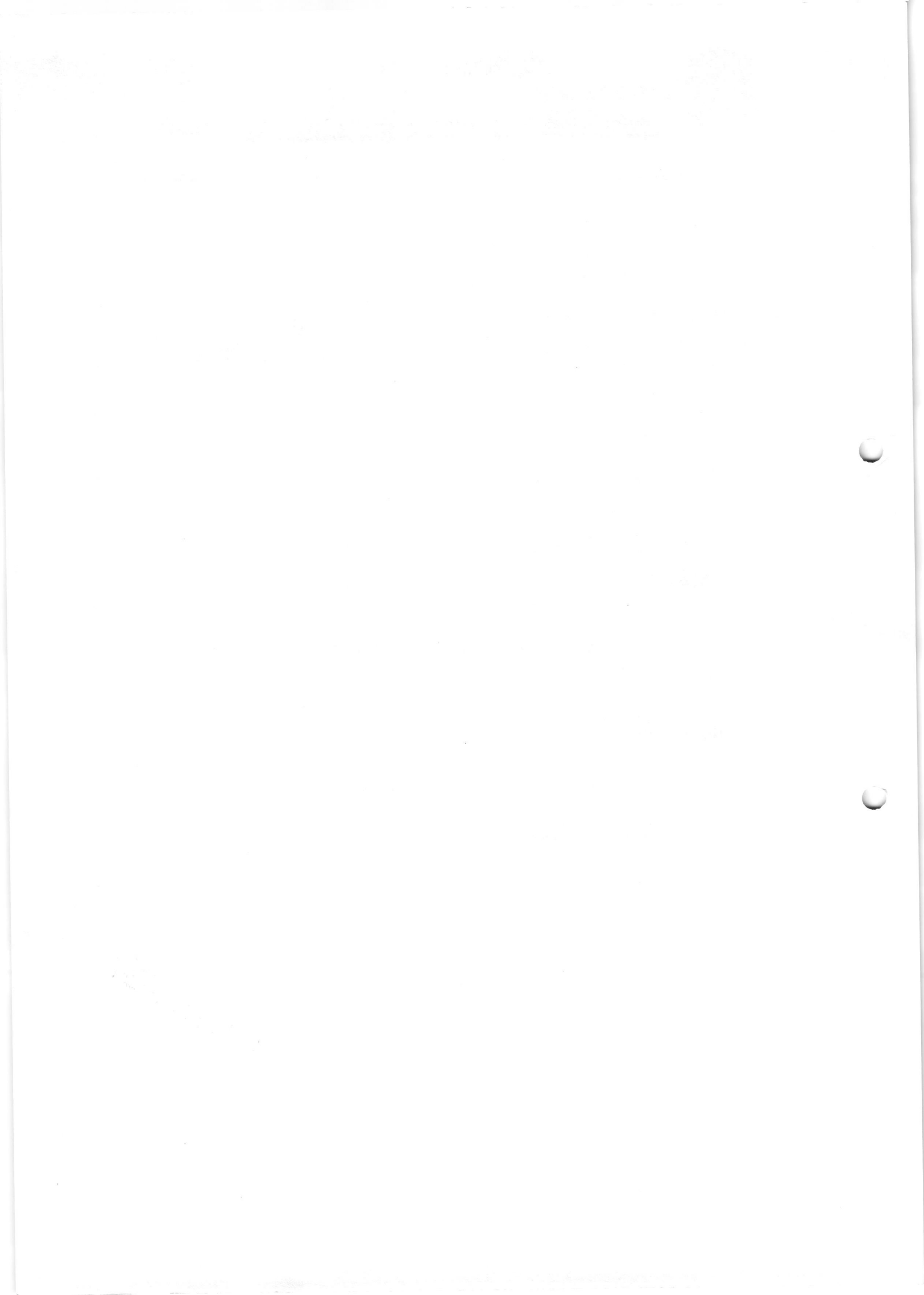
As a part of interaction, Memorandum of Understanding (MOUs) are made with various companies are listed here under.

S.No	Name of the company	Purpose	Date
1	Aries Solution Pvt Ltd	Design and Development of UAV's and UGV's	13/03/2020
3	Aerotics Technologies	Internships	07/08/2021
4	Brahmastra Aerospace	Internship and Faculty Training	06/09/2021
5	SS Technologies	Training on System Tool Kit	25/09/2021
6	MAFTREE, UK	Workshop and Training	15/11/2021
7	AVVRO Aviation Academy	Internship	13/06/2022
8	HYPSTUMA	Internship	24/08/2022

4. Industry associated with the Department for Projects and R&D activities

Sl.no	Industry	Purpose
1	M/s Big Bang Boom Solutions	UG Projects
2	Green Technologys	UG Projects
3	Accord Energy Corporation India Pvt.Ltd	R&D
4	Infinity Arsenal Pvt.Ltd	Industry supported Lab

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5. Events Organized by MOU companies :

S.No	Name of the company	Purpose	Date
1	Brahmastra Aerospace	Faculty Training given in MATLAB	06/09/2021
2	SS Technologies	Training on System Tool Kit to the students	25/09/2021
3	MAFTREE, UK	Workshop conducted as a part of pre-conference workshop NCRTAT'23	10/4/2023

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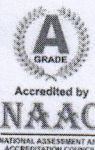
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6. Impact analysis of industry-institute interaction

The department maintains regular interaction with various companies and organizations to co-operate each other in terms of student internship, faculty training, collaborative research, and knowledge exchange. The outcome of these **industry-institute interaction** is participation of students and faculty in various industrial events/projects/research to get exposure to various technology and equipment, economical product design and fabrication and collaborative research.

The details of the students participation in various industrial events/projects/research are given below.

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