A.C.S. COLLEGE OF ENGINEERING



BENGALURU

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi and Govt. of Karnataka)

DEPARTMENT OF AERONAUTICAL ENGINEERING

NEWSLETTER

2020-2021



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Mr.Arun.A.K

Assistant Professor

Department of Aeronautical Engineering

ABOUT AERONAUTICAL DEPARTMENT

The Department of Aeronautical Engineering aims to provide talented, motivated and competent students with Aeronautical engineering curriculum of the highest quality, that will enable them to reach the global standard.

COURSES OFFERED

B.E & M.TECH – AERONAUTICAL ENGINEERING

With the intensions to fulfill the increasing demands of skilled manpower in Aero-based industries and hence to serve the society, the Department of Aeronautical Engineering was established in year 2010 with under Graduate Course in Bachelor of Engineering in Aeronautical Engineering under VTU, Belgaum. The course is approved by AICTE, New Delhi and Seven batches have been graduated successfully. In 2018, We established Post-graduate course in Master of Technology in Aeronautical Engineering under VTU, Belgaum.



FACULTY DETAILS

PARTICULARS QUANTITY TEACHING FACULTY 11 NON TEACHING FACULTY 3 COMPLETED Ph. D 3 PURSUING Ph. D 4 M.E/M.TECH/M.S 4

STUDENT DETAILS

PARTICULARS	QUANTITY
I –YEAR	63
II – YEAR	87
III – YEAR	66
IV - YEAR	54
Total	270

Department is equipped with following laboratories:

Aerodynamics Laboratory

Propulsion Laboratory

Structures Laboratory

Energy Conversion Laboratory

Mechanical Measurements and Metrology Laboratory

Machine shop laboratory

Design, Modeling and Analysis Laboratory

Simulation Laboratory

Foundry and Forging Laboratory

Metallography and Material Testing Laboratory



LABORATORY DETAILS



Aerodynamics Lab



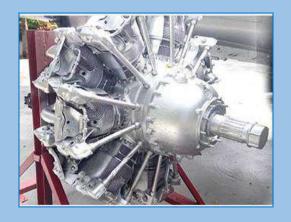
Propulsion Lab



Structures Lab



Energy conversion Lab



Hands on training on piston and jet engine

LABORATORIES DETAILS



Mechanical measurements & Metrology Lab



Machine Shop Lab



Design, Modeling & Analysis Lab



Simulation Lab



Foundry & Forging Lab



Metallography & Material Testing Lab

MEMORANDUM OF UNDERSTANDING SIGNED BY THE DEPARTMENT

S.No	Organization	Research details	
1	SAC,ISRO	IRNSS Receiver Deployment in ACSC Campus for Field Trail. Two Receivers worth 24 lakhs INR	
2	Sukra Helitek	CFD Analysis and training	
3	GLOINNT Solutions	Student projects, workshops and FDP's	
4	Valles Marineris	Student projects, workshops and FDP's	
5	Aerojet Aviation	Design and Career Guidance	
6	Aerolus Aero Tech Pvt Ltd	Design and Modelling	
7	Pongu Ventures Pvt Ltd	Innovation, Start-up	

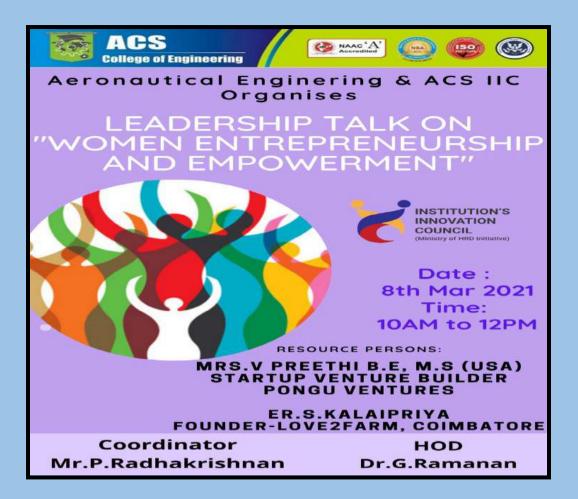
PROGRAMME ORGANIZED IN THE DEPARTMENT

S.No	PROGRAMME		
1	Webinar on "Kalam 89-SEA PLANE AND HOVERCRAFT" on 15-10-2020 by Dr.K.Ramachandra, Former Director of National Design and Research Foundation		
2	Webinar on "INDUSTRY 4.0" on 25-11-2020 by Mr. sreekanta Aradhya Robert Bosch Solutions		
3	Webinar on "SYSTEMS TOOL KIT- Software" on 28-11-2020 by Mr.Dhanish Abdul Khader, Space System Engineer, SS Technologies Bangalore		
4	Webinar on "The Evolution of Flight Vehicle Control, Guidance and sensors since World War 2" on 12-12-2020		
5	Webinar on "Leadership Talk on Women Entrepreneurship and Empowerment" on 08-03-2021 by Er. S. Kalaipriya, Founder - #Love2Farm, Coimbatore and Mrs. Preethi M.S (USA) Startup venture builder #PonguVentures, Chennai		
6	Webinar on "Missile Aerodynamics" on 05-06-2021 by Dr G. Balu(Retd) Sc 'H'/Outstanding scientist Group Director (Design) DRDL Hyderabad		
7	Webinar on "Transition from a Fresh graduate to a professional" on 12-06-2021 by Mr.S.S.Subramanya, Sastry Chief consultant, om Techtrade Enterprises Bangalore		
8	Webinar on "Winning Resume Writing" on 19-06-2021 by Mr. K Mahendran, Assistant Professor, Don Bosco College of Arts and Science, Tuticorin		
9	Webinar on "How to crack a GD" on 20-06-2021 by Mr. K Mahendran, Assistant Professor, Don Bosco College of Arts and Science, Tuticorin		
10	Webinar on "How to Face an Interview" on 27-06-2021 by Mr. K Mahendran, Assistant Professor, Don Bosco College of Arts and Science, Tuticorin		
11	Seminar on "Recruitment process of Indian Airforce" on 04/08/2021 by wing commander Santhosh s hedge commanding officer, 7Airmen selection Centre, 1cubbon Road, Bangalore		



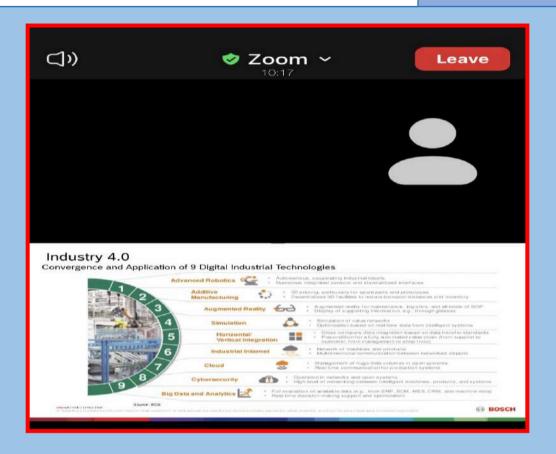


Webinar on "Kalam 89-SEA PLANE AND HOVERCRAFT"





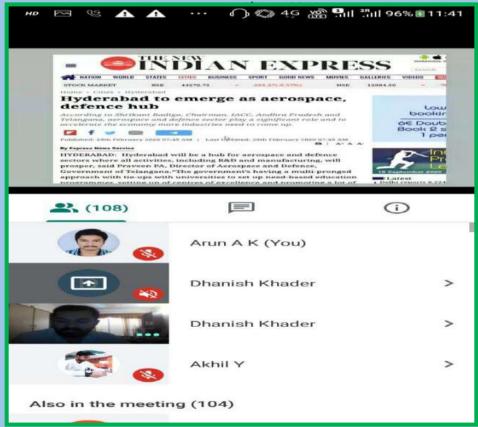
Webinar on "Leadership Talk on Women Entrepreneurship and Empowerment"





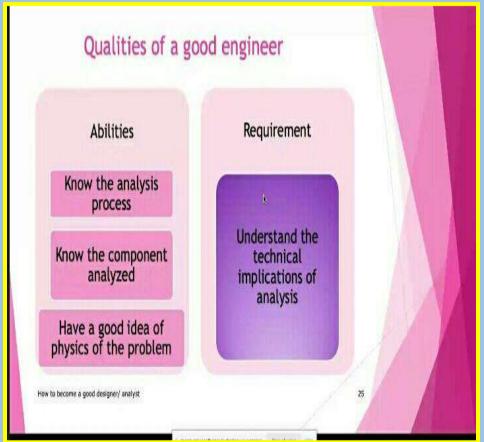
Webinar on "INDUSTRY 4.0"





Webinar on "SYSTEMS TOOL KIT- Software"





Webinar on "Transition from a Fresh graduate to a professional"

You should be on time in G.D.

why G.D is Conducted?

- To evaluate how the candidates can function as a part of a team
- Interactive Skills
- Behaviour (open minded)
- Leadership Quality
- Motivational Skills
- Different Thinking
- Assertiveness, Flexibility, and Creativity

TIPS

- Be Cool
- Be Active
- Be Yourself
- Record your voice
- Practice in front of the mirror
- Presence of the mind
- Stay goal oriented 'Remind 'I would like to remind you all expected topic is not focussed
- Say 'Thank You 'before end his or her speak.

5 BELIEVES

- Initiate scores the highest
- Speaking more; more knowledge
- Good language (tough English)
- More statistics(well read)
- Speek loudly (high self

anfidant)

Webinar on "How to crack a GD"

Interview

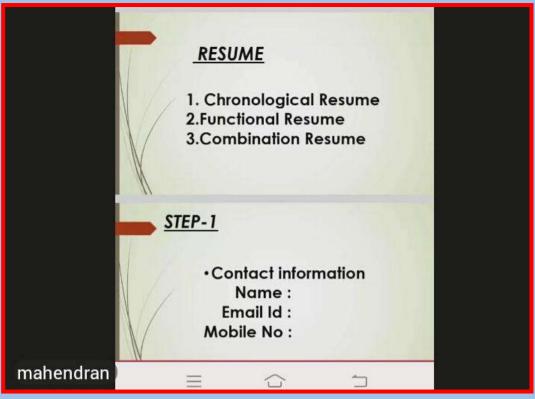
 Select a smart candidates for an organisation because Candidates coming from different language, Social background, Religion and Culture.

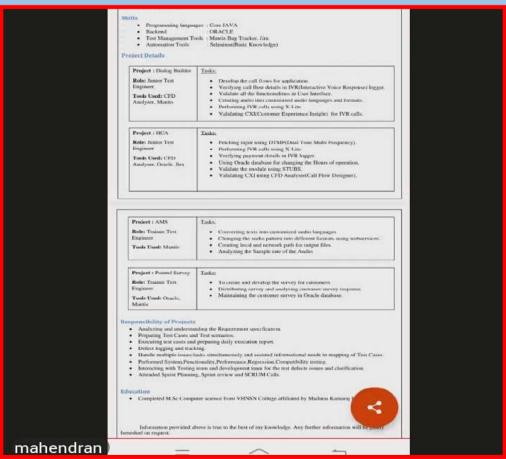
- **Before interview** Know either walk in Interview or Formal Interview
- Know the Venue and Time
- Prepare to reach the Venue atleast 30 minutes as early as possibl
- Prepare a formal dress and avoid Lekins, Lou kip pands, threads, Stud

10)Do you have any questions to ask me?

- **Salary structure**
- **Job timings**
- **Training period**
- **Overtime allowence**
- **Transport facility**

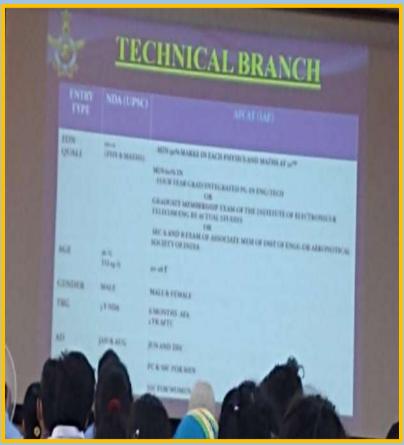
Webinar on "How to Face an Interview"





Webinar on "Winning Resume Writing"





Seminar on "Recruitment process of Indian Airforce"

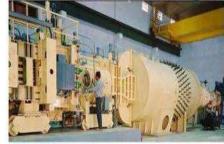






- · Intermittent blowdown type tunnel
- · Year of establishment: 1967
- Test section size 1.22mx1.22m
- . Mach number range: 0.2 to 4.0
- · Reynolds number range: 8 to 60 million per metre

0.6m Trisonic Wind Tunnel, NAL, Bangalore



- Intermittent blowdown type
 Year of establishment: 1989
- Test Section size: 0.6m x 0.6m
- Mach number range: 0.2 to 1.2, 1.0 to 4.0 (after augmentation)
- · Reynolds number range: 8 to 60 million per metre

National Wind Tunnel Facility, IITX





- Return Circuit, Continuous, Clased Jet, Atmospheric
- 3m x 2,25m x 5.75m (upstream part) + 3m (downstream part) : 80 m/s
- Max Wind Speed
- Reynolds Number : 5 x 10⁸/m
- Fan
- : 4,64 m diameter, 12 bladed
- Motor rating
- : 1000 kW variable speed DC motor 450 RPM



Webinar on "Missile Aerodynamics"

STUDENT PROJECT WORK

Batch No	TITLE	Guide		
Sixtee	Sixteen projects were undertaken by Final year students in the academic year 2020-2021			
1	Integration of a biodegradable composite on aircraft structures	Dr.G.Ramanan		
2	Detection and analysis of unhealthy plants using NDVI and autonomous flight control system	Mr.Albert Allen D Mello		
3	Modeling and Simulation analysis of wing by modifying winglet design	Mr.Radhakrishnan		
4	Flight Vehicle telemetry Spectral analysis and Noise removal using DSP algorithms	Dr.A.K.Sarkar		
5	Develop a single switch deployable mechanism for satellite antennas	Prof.P.Soma		
6	Simulation of boundary layer behavior on a morphing airfoil	Mr.Arun A K		
7	Design optimization and experimental verification of wing spar of NACA 65-415	Mr. Albert Allen D Mello		
8	Design and analysis of wing with cropped delta vortex generators	Mr. Ranjan H M		
9	Preliminary design and power irradiance calculation of a solar powered UAV	Mr. Inamul Hasan		
10	Modelling and simulation analysis of wing by modifying winglet design	Mr. Ranjan H M		
11	Experimental analysis to reduce stalling using retractable dimples	Mr.Radhakrishnan		
12	Design and Finite Element Analysis of horizontal tail structure for a light business jet aircraft	Mr.Dhanya Prakash R Babu		
13	Fabrication and testing of mechanical properties of carbon nano- fiber composite for a/c brakes	Mr. Arun A K		
14	Flight dynamic modeling and Simulation of a flight vehicle	Dr.A.K.Sarkar		
15	Impact of change in angle, length and number of chevrons on acoustic levels for engine cowling	Mr.Dhanya Prakash R Babu		
16	Simulation and Analysis of Fluid Structure Interaction on an aircraft wing	Mr.Dhanya Prakash R Babu		











Aeronautical Engineering

Students project proposal entitled

"Integration of biodegradable composites in
aircraft structures"



Approved for sponsorship

44th Series Student Project Programme 2020-21 Karnataka State Council for Science and Technology Indian Institute of Science Campus Bengaluru-560012



Akshatha R D 1AH17AE005



Ananya U Manvi 1AH17AE003



Pruthvi D K 1AH17AE059



भारतीय विज्ञान संस्थान

Suhas B A 1AH17AE007

Under the Guidance of



Dr.G.Ramanan Associate Professor Aeronautical Engineering



The Management, Principal, HOD and Staff Congratulates the Team

For Further Details Contact: +91-9008545678 E-mail: admission@acsce.edu.in Website: www.acsce.edu.in

INDUSTRIAL VISIT, IN-PLANT TRAINING & INTERNSHIPS

S.No

PROGRAMME

56 students completed their internships in different companies like HAL, CSIR NIIST, ADE-DRDO, Contriver, Bramastra aerospace systems, Aerotics technologies, Verzeo etc...







An Innovative project titled "DETECTION AND ANALYSIS OF UNHEALTHY PLANTS USING NDVI AND AUTOMOUS FLIGHT CONTROL SYSTEM" by Raghavendra, Abhishek & Bhavana

CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

S.No	Name of the student	Event Name	Prize
1	Syed shabaaz	Gate Aerospace Engineering 2021	All India Rank 605
2	Nanda Kishor N.G	Gate Aerospace Engineering 2021	All India Rank 856













#207, Kambipura, Mysore Road, Bangalore – 560 074.

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Department of Aeronautical Engineering





Congratulations

SYED SHABAAZ FINAL YEAR STUDENT

AERONAUTICAL ENGINEERING

Cleared GATE 2021 All India Rank 605 (AE)

Best wishes from Management, Principal and faculty













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Department of Aeronautical Engineering





Congratulations

NANDA KISHOR N G
FINAL YEAR STUDENT
AERONAUTICAL ENGINEERING

Cleared GATE 2021 All India Rank 856 (AE)

Best wishes from Management, Principal and faculty

STAFF ACHIEVEMENT

Name of the Teacher(s)	Title of Paper	Publication citation	
Dr.G.Ramanan	Multi-response optimization of FSW process parameters of ZE42 alloy using RSM based grey relational analysis	Intelligent Manufacturing and Energy Sustainability, ISSN: 219 3018, February 2021	
Dr.G.Ramanan	Computational Analysis of Base Drag Reduction for a Subsonic Missile Projectile at Different Flow Velocity Conditions	International Journal of Vehicle Structures & Systems, Vol. 13, No.1, pp.28-31, January 2021	
Prof.P.Soma	Ordinary kriging – and cokriging – based surrogate modelfor ionospheric TEC prediction using NavIC/GPS data	Acta Geophysica, Vol.68, No.5, pp.1529-1547 August 2020	
Dr.G.Ramanan	A Novel Detection of Defects in Al–SiC Composite by Active Pulsed Infrared Thermography Using Data and Image Processing	Transactions of the Indian Institute of Metals, Vol. 73(11), pp. 2767–2783 August 2020	
Prof.P.Soma	Performance analysis of Navigation with Indian Constellation satellites	Journal of King Saud University Engineering Sciences, Vol. 32, pp.518-523, June 2020	
Mr.Arun A K	Fabrication of Maglev Assisted Take-Off System	SSRG International Journal of Mechanical Engineering, Vol 7 Issue 9, 9-14, September 2020	
Dr.R.Mukesh & Prof.P.Soma	Prediction of TEC using NavIC/GPS data with geostatistical method/forecasting capability comparison with other models	Astrophysics and Space Science, 365:152, September 2020	
Mr.Inamul Hasan	Aerodynamic Analysis Of Isolated 3 Bladed Helicopter With Supercritical Airfoil	Solid State Technology Volume: 63 Issue: 6, October 2020	
Mr.Arun A K	Numerical investigation of bio-diesel fuels for jet engine using CFD	Int. Research J. of Modernization in Engineering Tech. and Science, Vol.02, No.08, August 2020	
Dr.G.Ramanan	Error Diagnosis in Space Navigation Integration using Wavelet Multi Resolution Analysis with General Regression Neural Network	Smart Innovation, Systems and Technologies, ISSN: 2190-301, May 2020	





IAF 7 Airmen Selection Team Visited Aeronautical Department

MEMBERSHIP OF PROFESSIONAL BODIES

OUR RECRUITERS

S.N o	PROGRAMME
1	Dr.G.Ramanan, Associate Professor is a professional member of Institute for Engineering Research and Publication (IFERP) and American Institute of Aeronautics and astronautics(AIAA)
2	Mr. Inamul Hasan M, Assistant Professor is a member of IE(I).
3	Mr. Radha Krishnan P, Assistant Professor is a member of IE(I).
4	$\ensuremath{Mr}.$ Dhanya Praksh R.B , Associate professor is a member of AeSI and \ensuremath{MISTE}

















PLACEMENT

Our students are placed in Intel, Wipro, Mindtree, EMC², HCL, Cappemini etc. Some of the students are Entrepreneur and some of them are doing their Higher studies.



CLASS TOPPERS

ВАТСН	I RANK	II RANK	III RANK	
	IIISEMESTER			
2019 – 2023	Syed Tayeeb – 84%	Anju Jagadish – 84%	Ambika T – 82%	
	V SEMES	STER		
2018 – 2022	Swikruthi S Devakande– 85%	Prabhavathi.K– 83%	Spoorthi B.T - 83%	
VII SEMESTER				
2017– 2021	Niveditha.R-83%	Narendra.N – 82%	Shilpashree.H.G-81%	