Chief Patrons
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Moogambigai Charitable & Educational Trust
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Patrons
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Special Officer
Rajarajeswari Group of Institutions

Chief Editors
Dr. G. Ramanan
Associate Professor & Head
Department of Aeronautical Engineering

Editors
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 intentions 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.
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
AERONAUTICAL DEPARTMENT NEWSLETTER

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

<table>
<thead>
<tr>
<th>S.No</th>
<th>Organization</th>
<th>Research details</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>SAC, ISRO</td>
<td>IRNSS Receiver Deployment in ACSCE Campus for Field Trail. Two Receivers worth 24 lakhs INR</td>
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<tr>
<td>2</td>
<td>Sukra Helitek</td>
<td>CFD Analysis and training</td>
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<tr>
<td>3</td>
<td>GLOINNT Solutions</td>
<td>Student projects, workshops and FDP’s</td>
</tr>
<tr>
<td>4</td>
<td>Valles Marineris</td>
<td>Student projects, workshops and FDP’s</td>
</tr>
<tr>
<td>5</td>
<td>Aerojet Aviation</td>
<td>Design and Career Guidance</td>
</tr>
<tr>
<td>6</td>
<td>Aerolus Aero Tech Pvt Ltd</td>
<td>Design and Modelling</td>
</tr>
<tr>
<td>7</td>
<td>Pongu Ventures Pvt Ltd</td>
<td>Innovation, Start-up</td>
</tr>
<tr>
<td>S.No</td>
<td>PROGRAMME</td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Webinar on “Kalam 89-SEA PLANE AND HOVERCRAFT” on 15-10-2020 by Dr.K.Ramachandra, Former Director of National Design and Research Foundation</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Webinar on “INDUSTRY 4.0” on 25-11-2020 by Mr. sreekanta Aradhya Robert Bosch Solutions</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Webinar on “SYSTEMS TOOL KIT- Software” on 28-11-2020 by Mr.Dhanish Abdul Khader, Space System Engineer, SS Technologies Bangalore</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Webinar on “The Evolution of Flight Vehicle Control, Guidance and sensors since World War 2” on 12-12-2020</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Webinar on “Missile Aerodynamics” on 05-06-2021 by Dr G. Balu(Rtd) Sc ‘H’/Outstanding scientist Group Director (Design) DRDL Hyderabad</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Webinar on “Winning Resume Writing” on 19-06-2021 by Mr. K Mahendran, Assistant Professor, Don Bosco College of Arts and Science, Tuticorin</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>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</td>
<td></td>
</tr>
</tbody>
</table>
Webinar on “Kalam 89-SEA PLANE AND HOVERCRAFT”
AERONAUTICAL DEPARTMENT NEWSLETTER

Aeronautical Engineering & ACS IIC Organises

LEADERSHIP TALK ON
"WOMEN ENTREPRENEURSHIP AND EMPOWERMENT"

INSTITUTION’S INNOVATION COUNCIL
(Ministry of MSME Initiative)

Date:
8th Mar 2021
Time:
10AM to 12PM

RESOURCE PERSONS:
MRS. V PREETHI B.E, M.S (USA)
STARTUP VENTURE BUILDER
PONGU VENTURES

ER. S. KALAI PRIYA
FOUNDER-LOVE2FARM, COIMBATORE

Coordinator
Mr. P. Radhakrishnan

HOD
Dr. G. Ramanan

Webinar on “Leadership Talk on Women Entrepreneurship and Empowerment”

Economic Upliftment by Promoting Women Startups

Presented by -
Mrs. Preethi Vinoth, B.E, M.S (USA)
Pongu Ventures
Webinar on “INDUSTRY 4.0”
KALAMS’ DAY 2019

Teachers day Celebration

OUR LIMIT IS BEYOND SKY

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)
- Speak loudly (high self confident)

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 pandas, threads, Stud

10) Do you have any questions to ask me?

- Salary structure
- Job timings
- Training period
- Overtime allowance
- Transport facility

Webinar on “How to Face an Interview”
AERONAUTICAL DEPARTMENT NEWSLETTER

**RESUME**

1. Chronological Resume
2. Functional Resume
3. Combination Resume

**STEP 1**

- Contact information
  - Name:
  - Email Id:
  - Mobile No:

Webinar on “Winning Resume Writing”
Seminar on “Recruitment process of Indian Airforce”
**Webinar on “Missile Aerodynamics”**

**1.2m Trisonic Wind Tunnel, NAL, Bangalore**
- Intermittent blowdown type tunnel
- Year of establishment: 1967
- Test section size: 1.22m x 1.22m
- 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 50 million per metre

**National Wind Tunnel Facility, IIT**
- Return Circuit, Continuous, Closed set, Atmospheric
- Size: 3.25m x 3.25m (upstream part) x 3m (downstream part)
- Max Wind speed: 90 m/s
- Reynolds Number: 3 x 10^7 m
- Fan: 4.64 m diameter, 12 blades
- Motor rating: 1000 HP, variable speed DC motor 450 RPM
<table>
<thead>
<tr>
<th>Batch No</th>
<th>TITLE</th>
<th>Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Integration of a biodegradable composite on aircraft structures</td>
<td>Dr.G.Ramanan</td>
</tr>
<tr>
<td>2</td>
<td>Detection and analysis of unhealthy plants using NDVI and autonomous flight control system</td>
<td>Mr.Albert Allen D Mello</td>
</tr>
<tr>
<td>3</td>
<td>Modeling and Simulation analysis of wing by modifying winglet design</td>
<td>Mr.Radhakrishnan</td>
</tr>
<tr>
<td>4</td>
<td>Flight Vehicle telemetry Spectral analysis and Noise removal using DSP algorithms</td>
<td>Dr.A.K.Sarkar</td>
</tr>
<tr>
<td>5</td>
<td>Develop a single switch deployable mechanism for satellite antennas</td>
<td>Prof.P.Soma</td>
</tr>
<tr>
<td>6</td>
<td>Simulation of boundary layer behavior on a morphing airfoil</td>
<td>Mr.Arun A K</td>
</tr>
<tr>
<td>7</td>
<td>Design optimization and experimental verification of wing spar of NACA 65-415</td>
<td>Mr. Albert Allen D Mello</td>
</tr>
<tr>
<td>8</td>
<td>Design and analysis of wing with cropped delta vortex generators</td>
<td>Mr. Ranjan H M</td>
</tr>
<tr>
<td>9</td>
<td>Preliminary design and power irradiance calculation of a solar powered UAV</td>
<td>Mr. Inamul Hasan</td>
</tr>
<tr>
<td>10</td>
<td>Modelling and simulation analysis of wing by modifying winglet design</td>
<td>Mr. Ranjan H M</td>
</tr>
<tr>
<td>11</td>
<td>Experimental analysis to reduce stalling using retractable dimples</td>
<td>Mr.Radhakrishnan</td>
</tr>
<tr>
<td>12</td>
<td>Design and Finite Element Analysis of horizontal tail structure for a light business jet aircraft</td>
<td>Mr.Dhanya Prakash R Babu</td>
</tr>
<tr>
<td>13</td>
<td>Fabrication and testing of mechanical properties of carbon nano-fiber composite for a/c brakes</td>
<td>Mr. Arun A K</td>
</tr>
<tr>
<td>14</td>
<td>Flight dynamic modeling and Simulation of a flight vehicle</td>
<td>Dr.A.K.Sarkar</td>
</tr>
<tr>
<td>15</td>
<td>Impact of change in angle, length and number of chevrons on acoustic levels for engine cowling</td>
<td>Mr.Dhanya Prakash R Babu</td>
</tr>
<tr>
<td>16</td>
<td>Simulation and Analysis of Fluid Structure Interaction on an aircraft wing</td>
<td>Mr.Dhanya Prakash R Babu</td>
</tr>
</tbody>
</table>

Sixteen projects were undertaken by Final year students in the academic year 2020-2021
Aeronautical Engineering

Students project proposal entitled
“Integration of biodegradable composites in aircraft structures”
Approved for sponsorship by
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
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

<table>
<thead>
<tr>
<th>S.No</th>
<th>PROGRAMME</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>56 students completed their internships in different companies like HAL, CSIR NIIST, ADE-DRDO, Contriver, Brahmastra aerospace systems, Aerotics technologies, Verzeo etc…</td>
</tr>
</tbody>
</table>

AERONAUTICAL ENGINEERING

Congratulations

SUSHMITHA KATTI

USN: 1AH16AE054
2016-2020 BATCH

For awarded

VTU 9th Rank

All the best for your future endeavours

Best wishes from management, Principal, HOD and faculty

#207, Kambipura, Mysore Road, Bangalore – 560 074. Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi and Govt. Of Karnataka
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

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the student</th>
<th>Event Name</th>
<th>Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Syed shabaaz</td>
<td>Gate Aerospace Engineering 2021</td>
<td>All India Rank 605</td>
</tr>
<tr>
<td>2</td>
<td>Nanda Kishor N.G</td>
<td>Gate Aerospace Engineering 2021</td>
<td>All India Rank 856</td>
</tr>
</tbody>
</table>
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

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
<table>
<thead>
<tr>
<th>Name of the Teacher(s)</th>
<th>Title of Paper</th>
<th>Publication citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr.G.Ramanan</td>
<td>Multi-response optimization of FSW process parameters of ZE42 alloy using RSM based grey relational analysis</td>
<td>Intelligent Manufacturing and Energy Sustainability, ISSN: 2190-3018, February 2021</td>
</tr>
<tr>
<td>Prof.P.Soma</td>
<td>Performance analysis of Navigation with Indian Constellation satellites</td>
<td>Journal of King Saud University Engineering Sciences, Vol. 32, pp.518-523, June 2020</td>
</tr>
<tr>
<td>Mr.Arun A K</td>
<td>Fabrication of Maglev Assisted Take-Off System</td>
<td>SSRG International Journal of Mechanical Engineering, Vol 7 Issue 9, 9-14, September 2020</td>
</tr>
<tr>
<td>Dr.R.Mukesh &amp; Prof.P.Soma</td>
<td>Prediction of TEC using NavIC/GPS data with geostatistical method/forecasting capability comparison with other models</td>
<td>Astrophysics and Space Science, 365:152, September 2020</td>
</tr>
<tr>
<td>Mr.Inamul Hasan</td>
<td>Aerodynamic Analysis Of Isolated 3 Bladed Helicopter With Supercritical Airfoil</td>
<td>Solid State Technology Volume: 63 Issue: 6, October 2020</td>
</tr>
<tr>
<td>Mr.Arun A K</td>
<td>Numerical investigation of bio-diesel fuels for jet engine using CFD</td>
<td>Int. Research J. of Modernization in Engineering Tech. and Science, Vol.02, No.08, August 2020</td>
</tr>
<tr>
<td>Dr.G.Ramanan</td>
<td>Error Diagnosis in Space Navigation Integration using Wavelet Multi Resolution Analysis with General Regression Neural Network</td>
<td>Smart Innovation, Systems and Technologies, ISSN: 2190-301, May 2020</td>
</tr>
</tbody>
</table>
IAF 7 Airmen Selection Team Visited Aeronautical Department
MEMBERSHIP OF PROFESSIONAL BODIES

<table>
<thead>
<tr>
<th>S.N</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>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)</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Inamul Hasan M, Assistant Professor is a member of IE(I).</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Radha Krishnan P, Assistant Professor is a member of IE(I).</td>
</tr>
<tr>
<td>4</td>
<td>Mr. Dhanya Praksh R.B, Associate professor is a member of AeSI and MISTE</td>
</tr>
</tbody>
</table>

PLACEMENT

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

#### CLASS TOPPERS

<table>
<thead>
<tr>
<th>BATCH</th>
<th>I RANK</th>
<th>II RANK</th>
<th>III RANK</th>
</tr>
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<tbody>
<tr>
<td><strong>IIISEMESTER</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2019 – 2023</td>
<td>Syed Tayeeb – 84%</td>
<td>Anju Jagadish – 84%</td>
<td>Ambika T – 82%</td>
</tr>
<tr>
<td><strong>V SEMESTER</strong></td>
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</tr>
<tr>
<td>2018 – 2022</td>
<td>Swikruthi S Devakande – 85%</td>
<td>Prabhavathi K – 83%</td>
<td>Spoorthi B.T – 83%</td>
</tr>
<tr>
<td><strong>VII SEMESTER</strong></td>
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</tr>
<tr>
<td>2017 – 2021</td>
<td>Niveditha R – 83%</td>
<td>Narendra N – 82%</td>
<td>Shilpashree H.G – 81%</td>
</tr>
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</table>