



APOLLO ENGINEERING COLLEGE

(APPROVED BY THE AICTE, AFFILIATED TO ANNA UNIVERSITY)

Near Queens Land, Poonamallee, Chennai-602105



There's nothing in the world you can't engineer

Engineering is no longer bound by the traditional image of a man in a safety helmet, notepad in hand. Possibilities abound in every sphere. At AEC Faculty of Engineering and Technology, you will discover many of these new and exciting aspects and be prepared to master them.

Engineering & Technology

Each department has every resource to conduct both research and instruction independently. Fully functional laboratories, access to the latest equipment and experienced faculty member will enrich your learning experience. The curriculum is updated to include changes around the world.

Outreach

Engineering students have access to global networks and collaborations. Several memorandums of understanding are already in place of research and knowledge sharing as well as student exchange.

Students have access to every form of information at the central library and the various departmental libraries. They will find inspiration and encouragement on this campus, to pursue research and bring innovative ideas to life.



DEPARTMENT OF AERONAUTICAL ENGINEERING

Aeronautical engineers require a solid understanding of key concepts including aerodynamics, aircraft structure, maintenance, propulsion and flight instrumentation. They use these principles in design and analysis of aircraft, runways etc., Aeronautical engineering, as popularly quoted, is mechanical engineering done better. Here engineering design and analysis are more precise using advance materials. With the explosive growth in civil aviation, satellite communication and space exploration, the demand for aerospace engineers is simply incalculable.

Vision

To contribute to the field of Aeronautics & Space science through excellence in technical education and research; to serve as a globally valuable resource and to be a source of knowledge.

Mission

To develop human potential to its fullest extent so that intellectually capable and imaginatively gifted leaders can in the Aeronautics.

To generate new knowledge by engaging in cutting edge research and to promote academic growth by offering state-of-the-art programmes.

Academics

Undergraduate

The goal of the B.E program in Aeronautical engineering is to train the students in a broad based manner with equal focus on applications in aircraft engineering, rocket and space technology. The curriculum is designed to impart engineering knowledge in topics such as aircraft structures, propulsion, aerodynamics, space dynamics and UAV. Students can also acquire additional engineering knowledge through electives.

Faculty and research

The members of faculty have vast industrial experience and are engaged in consultancy. A few faculty members are currently possessing their research proposals for submitting to funding agencies. Research efforts are in the areas of computational fluid dynamics in ramjets, aircraft structures.

Laboratories & facilities

Department of Aeronautical engineering has over 12 laboratories including Aircraft structures, Airframe, Aero engine and maintenance, propulsion lab etc. A subsonic research windtunnel with hot wire anemometer, pressure scanner is available. The associated laboratories such as CAD lab, Dynamics lab, metrology lab and metallurgy lab in the sister departments of the school are made available to students.

Careers

Graduates in Aerospace Engineering can seek employment in Civil aviation, Defense R&D laboratories, space research organizations and CSIR laboratories. Aerospace graduates are also preferred by software industries engaged in engineering - software developments. In addition to these, graduates can enter general fields like management and civil services. Those having a flair for higher education and research can pursue M. Tech and Ph.D. In previous years, more than 80% of the students were placed in reputed companies through campus recruitment.

Department library

To supplement the resources in the central library, there is an exclusive department library consisting of books, proceedings of workshop/seminars, national and international journals, students project reports, laboratory manuals, etc.

Activities and achievements

The students and faculty take part in national/ international conferences as well as workshops and seminars in their areas of interest. This gives them a valuable insight into global trends and advances in the aerospace field. Short - term training programs are conducted twice in a year. This department is associated with IEEE.

Industrial training

Students are encouraged to undergo industrial training during the course of their academic programs in order to instil within them a thirst for the practical implementation of the various concepts they have learnt. The department also organizes personality development programs to increase their job readiness. The department also has an active industry partnership program that builds rapport with industry sources and focuses on maintaining contact with them. These contacts ensure students have no trouble when they seek practical exposure.

LABORATORIES

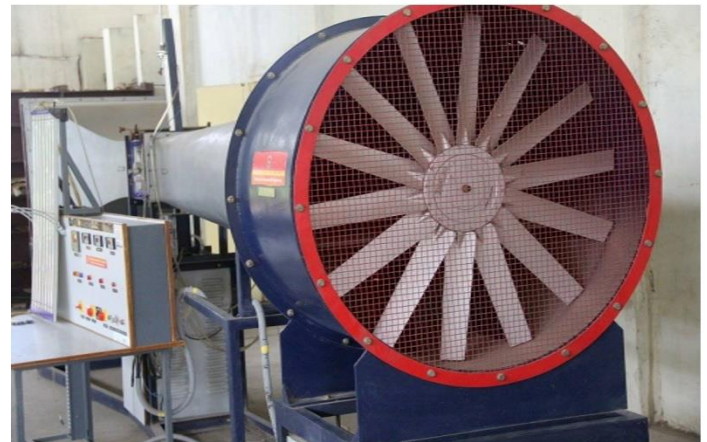
AERODYNAMICS & PROPULSION LAB

- Aircraft & engines
- Low speed open circuit wind tunnels
- Jet specialty with compressor and storage tank
- Supersonic nozzle specimen
- Co axial jet model
- Pressure transducer
- Ramjet specialty
- Diffuser specimen
- Pressure sensor 8 channel
- Conical flame holder
- Compressor blade row model



AIRCRAFT STRUCTURES LAB

- Beam test apparatus
- Cantilever beam
- Column test apparatus
- Strain gauge test setup
- Unsymmetrical bending Wagner beam
- Polariscope
- Combined loading setup



SYSTEMS & MAINTENANCE LAB

- Levelling pad
- Towing
- Hydraulic system
- Brake system
- NDT



DEPARTMENT EVENTS

AeroBuzz- A Tech Fest

Venue: Seminar Hall

Summary:

The department has organized the workshop on water rocketry, aeromodelling and conducted a technical quiz to the students.



Fresher's Fair

Guest of honor: **Mr. Shikhar Chaturvedi**

Venue: Seminar Hall

Summary:

The department has organized the Fresher's fair event for 2nd year students and conducted a technical quiz.



First Year Inauguration 2k15

Guest of honor: **Prof. Dr. A. Elayaperumal**
DIRECTOR, Centre for Students & Affairs,
Anna University

Venue: Sakuntallamal Auditorium

Summary:

Dr. A. Elayaperumal inaugurated the freshers day and it was followed by orientation about AERO department given by staff and senior students of the department.



AERO students @ Pongal Celebration

Pongal 2K15 was celebrated at AEC on 9th Jan 2015 with pot rice to Farmer. AERO Apollites rejoiced in their tradition



AERO students @ International Women's Day Celebration:

International Women's day was celebrated in college. Various events were organized for the faculties and students of AEC such as: Rangoli competition, Mehendi competition, Culture dressing, Cookery without flame, Vegetable carving and more Fun games.

Dr. Jayanthikalanithi, Managing Director of Vee Care group of Hospitals was the chief guest for the event. The winners were awarded during the valedictory function.



Annual Sports meet 2K15



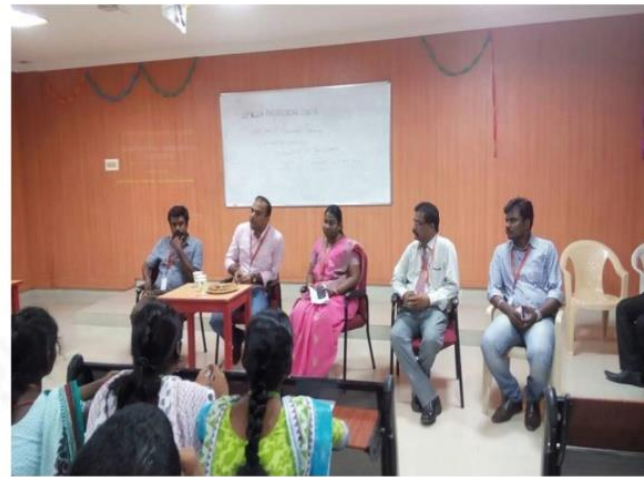
AERO final year student GANESAN won the Individual Champion 2K15

Seminar on recent trends in Aerospace

Venue: Aero Smart Room

Summary:

The department has organized seminar session to the third and final year students about signal transfer in space. Heads from various department guide our students



Industrial visit & Tour

Industrial Visit and tour were organized for all the Aeronautical students to enhance the knowledge of the students on the current field of Aeronautics and Aerospace.



Workshop on Rapid Prototype 2k16

Venue: AEC CAD Lab

One day workshop on rapid prototype were organized for all students. A brief theory was presented on how rapid prototype models are produced in industry. Experimental study was also given for the students which helped them to gain knowledge on rapid prototype.



NSS Camp 2k16

Every year our college organizes NSS camp to various places. Well trained NSS coaches will be accommodating the students to help them in various activities. This year camp has been organized at M.G.R Home, Ramapuram where NSS students arranged various activities and fun events for the children.



AERO students @ International Women's Day Celebration 2k17:

International Women's day was celebrated in college for the year 2k16. Various events were organized for the faculties and students of AEC such as: Rangoli competition, Mehendi competition, Culture dressing, Cookery without flame, Vegetable carving and more Fun games.



Dr.ushavishwanath MBBS, MD, Dip in hospital Administration, Gynecologist of Ramachandra hospital, Porur was the chief guest for the event. The winners were awarded during the valedictory function.

Annual Sports meet 2K17

Apart from education sports were also given major importance for the students to make them physically fit and well talented. Various sports were conducted both for faculties and students and winners were awarded from all events. Prof. Dr. S. Selladurai, Ph.D., additional registrar & chairman- Anna University sports board was the chief guest who inaugurated the sports meet.



Workshop Gliders & Water Rocketry 2K17

Venue: Aero Smart Room and Laboratory

Summary:

The department has organized workshop for second and third year students about the making and fabrication of glider and water rocketry. Detailed working principle along with flying classes were conducted.



Industrial visit & Tour 2K17

Special Industrial Visit were organized for the students followed by an educational tour to ISRO Kerala. Students learned a lot and gained knowledge about the recent trends in aeronautical industry.



Seminar on Lighter Than Air Vehicle Systems 2K17

Professor Dr.Rajkumar.S.Pant, Department of Aerospace Engineering, IIT-Bombay has delivered the lecture followed by a project review of Apollo Aerostat Team and Apollo Airship Team, Final year Aero students.



Also, discussion on the future developments of their work were a session.



Pongal celebration 2K17

AEC organized Pongal celebrations at its campus. All heads, faculty and students participated in traditional dress in this celebration. The students danced for traditional natupura songs. Various traditional games including Uriyadi, Tug-Of-War and many more were conducted for the students and staffs.



CAD Quest 2K16-Workshop

CAD workshop aimed on giving the students a detailed knowledge about design and drafting of various models. Brief explanation were given to the students on how to study 2D and 3D geometries.

Certificates and prizes were distributed to the students who have performed well during the workshop sessions.



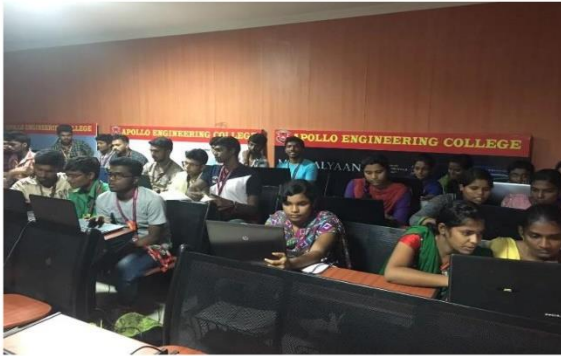
FDP on Finite Element Method – 2K16

Department of Aeronautical Engineering organized a Faculty Development Programme on Finite Element Method sponsored by Anna University, Chennai. Faculties from various colleges were participated and gained a handful of knowledge on FEM.



CFD workshop 2K16

CFD workshop was organized for aero students. A clear and detailed presentation were given to the students. Detailed explanation was given on how to handle the software using various models.



Students were trained on doing simulation analysis for various flow field.



School Workshop – 2K17

School workshop were organized for students to give awareness regarding aerospace and aeronautics in our society. It is also aimed to increase the knowledge of the students in engineering.



LIST ACADEMIC EVENTS ORGANIZED

Guest Lectures/Technical Talks

S. No	Topic	Expert	Date
1	Aero Buzz – A Tech Fest	Department, AEC	07/02/2015
2	Fresher's Fair-Motivational Technical talk for II year students	Mr.ShikharChaturvedi	09/07/2015
3	First year Inauguration	Prof.Dr.A.Elayaperumal	12/08/2015
4	Department Inauguration for Juniors	Department, AEC	17/8/2016
4	Recent Trends in Aerospace	Department, AEC	21/01/2017

Industrial Visit

S. No	Place	Month & Year	Student Participation
1	TAAL, Hosur	Sep 2014	38
2	BRAHMOS Aerospace Pvt Ltd, Hyderabad	Sep 2015	56
3	ISRO, Kerala	Sep 2016	97

Workshops

S.No	Topic	Chief Guest / Speaker	Date
1	Workshop on Glider Making	Aerotrix	25/07/2014
2	Workshop on water rocketry	Principal, AEC	07/02/2015
3	Aeromodelling Workshop	Mr.ShikarChaturvedi	09/07/2015
4	Faculty Development Program (FDP) on FEM	Dr.LathaNagendran, Dr.Santhana Krishan, Mr.M.Maheswaran, Mr.T.S.Sampath Kumar	19-25/01/2016
5	Workshop on Gliders & Water Rocketry	Principal, AEC	13/08/2016
6	CAD Quest'16	Sri Design CAD Technologies Solutions Pvt Ltd	20/08/2016
7	CFD Workshop	Aerotrix	30&31/08/2016
8	Rapid Prototype	Principal, AEC	20&21/09/2016
9	Seminar on Lighter than Air Vehicle System	Prof.Rajkumar S Pant, IIT, Bombay	20.1.2017

FACULTY ACHIEVEMENTS

Research Publications

N.Rajamurugu et.al., "Analysis on High Speed Jet Flow Characteristics using CFD", International Journal of Mechanical Engineering Research, Volume 3,Number 6,2013, ISSN 2249-0019.Impact factor:0.132

N.Rajamurugu et.al.,"Analysis on High Speed Jet Flow Characteristics using CFD", Advances in aerospace Science and applications, Volume 3,Number 3,2013, ISSN 2277-3223. Impact factor:0.132

N.RajaMurugu et.al "Computational analysis of Vortex generator jets in LP turbines" International Journal Of Engineering Research and Technology(IJERT) volume I, Issue 8, October 2012, ISSN NO:2278-0181.

N.RajaMurugu et.al. "Modeling and Flow Analysis of Modern Fighter Aircraft Configuration Using -CFD", International journal of pure and applied research in engineering and technology, Issue 3, March 2013.

R.Rajsharmila et.al. "Vibration Analysis over an Aircraft Wing During Cruise Speed", International Journal of Pure & Applied Research in Engineering & Technology, Volume 3, December 2014.

S.Irish Angelin et.al., "Aerodynamic Drag Curtailment Using Phlegmatic Devices", International Journal of Engineering Research and Management, Vol-02,Issue-09, September2015.

S.Irish Angelin et.al., "Aerodynamic Designing of an Autogyro: Gyrocame", International Journal of Engineering and Science, Vol3, Issue01|2014.

S.Irish Angelin et.al., "Aerodynamic Shaping of Payload Fairing for a Launch Vehicle", International Journal of Engineering & Science Research, Vol-4,Issue-5, May 2015

International Conference Presentations:

Participated and presented a paper on Determination of Pressure Over Low Rise Gable Roof Building in 10th Asian Symposium on Flow Visualisation at SRM UNIVERSITY, 2010.

Participated and presented a paper in International conference on Impact Test on Composite Materials at ICAME'10 at VELTECH University, Chennai, 2010.

Participated and presented a paper in International conference on Waterflow Channel Useful Tool For Flow Visualisation at ICAME'10 at VELTECH University , Chennai,2010

Participated and presented on Vortex Generator Jets Employed on LP Turbines at ICAME'10 at VELTECH University, Chennai, 2010.

Participated and presented a paper on "Experimental investigation of a swept wings with control motions" at International conference ICMOC2012 at Noorul Islam University, Nagercoil,2012.



National conference Papers:

Participated and presented a paper on nonlinear gust response of an airplane wing at national level conference 3C's at MVJ college of engineering Bangalore, 2013.

Participated and presented a paper on "Experimental investigation of a swept wings with control motions" at national level conference at KLN Engineering College, Madurai, 2012.

Participated and won the second price in national level technical symposium at Hindustan University, September 2011.

Participated and presented a paper on non linear gust response of an airplane wing at national level conference 3c's at MVJCE Bangalore, Feb. 2013.

Participated and won the second price in national level technical symposium at Hindustan University, September 2011.

Participated and presented a paper on Vortex Generators at national level conference at Anna University of Technology, Tirunelveli, 2011.

Presented a National Conference paper on Design of a System with Damage Tolerance at Nehru Institute of Engineering and Technology, Coimbatore.

Presented a paper on Easton Matrix Composite Technology at Jeppiaar College, Chennai.

Presented a paper on Advance Technology in Propulsion at BIT, Erode.

WORKSHOP PARTNERS

Students are exposed to industrial environment on various basis, as like In Plant Trainings, Guest Lectures, Technical Talks and Workshops. Our department also holds Memorandum of Understanding with various organisations to aim in the process.

MOUs for Industrial Visit with



SCHEMA INDIA
Freelance Engineering






Professional Bodies with



Institute of
Aeronautics
Astronautics &
Aviation

Guest lectures and Technical talks are regular events in our department; there will be an average of two workshops, one guest lecturer and technical talk.

 Guest Lecturers / Technical Talks	: 5
 Workshops	: 8
 Industrial Visits	: 4



ANNA UNIVERSITY TOPPER



K.VISALI

BATCH-(2012-16)

being a student of AEC, in the Dept of Aero Engg, under the guidance & support of my staffs with knowledge in hands & open hearts I have secured Anna University Rank.

May today success be the beginning of tomorrow's achievement

ACHIVEMENTS

Two students have secured university rank in the passed out batch with three students contending in the present academic year.

Our students have reached heights in doing their projects under the current industrial research. They have visited IIT. Mumbai to show their projects

PLACEMENT PARTNERS



HR FEEDBACK

The best students are those who are most intelligent. They are the one who take advantage of their talents and work hard to surge ahead of all their candidates among them. Such students can be obtained from Apollo Engineering College.



GANESAN
SUTHERLAND
DESIGN ASSOCIATE



GOPI KRISHNAN
AMSI
DESIGN ASSOCIATE



DAISY GRACE
LIONSBRIDGE
TECHNICAL



PRABAKKARAN
SCHEMA INDIA
DESIGN ENGINEER



ELAMPARTHI
SCHEMA INDIA
DESIGN ENGINEER



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SUTHERLAND
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DHANYA SANTHOSHI
INDHUJA PVT.LTD
PRODUCTION



SRIRAM
SUTHERLAND
TECHNICAL SUPPORT