ISSUE 01 2019-2020

AERO NEWSLETTER

VISION

The Department of Aeronautical Engineering is committed to providing quality
education fostering excellence in academics, research and innovation to produce
aeronautical engineers who can contribute to society on a global scale.

MISSION

M1: To provide outcome-oriented learning that is based on research and innovation.
M2: To encourage cross-disciplinary learning and interaction with the global community.
M3: To enable a holistic education that is deeply rooted in social values.

INVITED TALK - THE REVOLUTIONARY CONCEPT OF BOUNDARY LAYER THEORY AND ITS PREVALENCE IN AERONAUTICS

11/10/2019

DEPARTMENT OF AERONAUTICAL ENGINEERING ORGANIZED AN INVITED TALK ON 11 OCTOBER 2019 ON 'THE REVOLUTIONARY CONCEPT OF BOUNDARY LAYER THEORY AND ITS PREVALENCE IN AERONAUTICS' AT MBA SEMINAR HALL. THE TALK WAS ORGANIZED UNDER THE FORUM OF EINSTEIN LECTURES IN ASSOCIATION WITH ICTS (INTERNATIONAL FORUM FOR THEORETICAL SCIENCES).

DR. SOURABH S DIWAN, PROFESSOR AT THE DEPARTMENT OF AERONAUTICAL ENGINEERING, INDIAN INSTITUTE OF SCIENCE, BENGALURU, ENLIGHTENED THE CROWD ON THE BASIC PHYSICAL IDEA, ITS CONSEQUENCES AND THE MATHEMATICAL PRELIMINARIES WHICH CONSTITUTES OF BOUNDARY LAYER THEORY. THE STRUCTURE OF TURBULENT BOUNDARY LAYER WHICH CONTRIBUTES TO NEARLY HALF OF THE FRICTIONAL DRAG EXPERIENCED BY A TYPICAL PASSENGER AIRCRAFT WAS ALSO DISCUSSED. THE TALK WAS ORGANIZED UNDER THE DEPARTMENT FORUM UDAAN, AND WAS COORDINATED BY PROF. SWETHA S AND PROF. MAHANTAYYA K H& PROF. VARSHA N UNDER THE GUIDANCE OF DR. SK MAHARANA.

21-22/10/2019

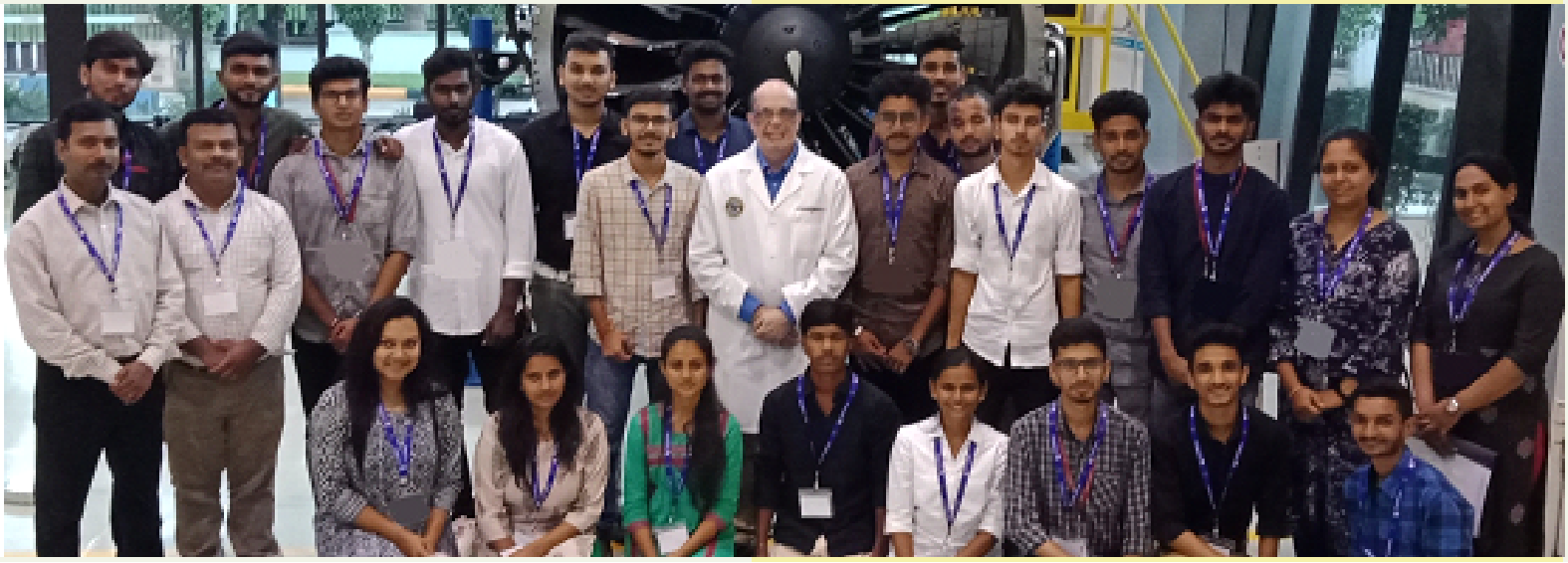
EDUCATIONAL VISIT - PRATT &WHITNEY TRAINING CENTER, HYDERABAD.

THE DEPARTMENT OF AERONAUTICAL ENGINEERING ORGANIZED AN EDUCATIONAL VISIT TO PRATT &WHITNEY TRAINING CENTRE, BIRLA SCIENCE MUSEUM & SALAR JUNG MUSEUM, HYDERABAD ON 21 -22 OF OCTOBER 2019.

PRATT & WHITNEY, AN AMERICAN AEROSPACE MANUFACTURER WITH GLOBAL SERVICE OPERATIONS IS A WORLD LEADER IN THE DESIGN, MANUFACTURE AND SERVICE OF AIRCRAFT ENGINES AND AUXILIARY POWER UNITS. IT IS A SUBSIDIARY OF UNITED TECHNOLOGIES. PRATT & WHITNEY'S AIRCRAFT ENGINES ARE WIDELY USED IN BOTH CIVIL AVIATION AND MILITARY AVIATION. THE TRAINING CENTER IN HYDERABAD PROVIDES INSTRUCTION IN GENERAL ENGINE FAMILIARIZATION, LINE AND BASE MAINTENANCE AND BORESCOPE INSPECTION TRAINING FOR PRATT & WHITNEY'S PORTFOLIO OF PRODUCTS.

THE THIRD YEAR AERONAUTICAL ENGINEERING STUDENTS WERE GIVEN WITH AN OPPORTUNITY TO UNDERSTAND THE WORKING OF V2500 AND PW1100G-JM ENGINES. THE STUDENTS ALSO VISITED THE RENOWNED BIRLA SCIENCE MUSEUM & SALAR JUNG MUSEUM.

THE TRIP WAS ORGANIZED UNDER THE GUIDANCE OF DR. S K MAHARANA AND WAS FACILITATED BY PROF. SWETHA S AND PROF. STEFFI THANGACHAN. THE STUDENTS WERE ALSO ACCOMPANIED BY PROF. MAHANTAYYA K H, PROF. VENUGOPAL M M AND MS. TEJASWINI A N.



4-5/11/2019

EDUCATIONAL VISIT - AIR INDIA ENGINEERING SERVICES LTD, (AIESL) MUMBAI

THE DEPARTMENT OF AERONAUTICAL ENGINEERING ORGANIZED AN INDUSTRIAL VISIT TO AIR INDIA ENGINEERING SERVICE LIMITED (AIESL), MUMBAI ON 14TH OF NOVEMBER 2019.AIR INDIA, IS THE COUNTRY'S PROUD FLAG CARRIER, WHICH ALSO HAS THE 'BIGGEST' MRO (MAINTENANCE REPAIR AND OVERHAUL) SET UP IN INDIA. AIESL HAS HUGE INFRASTRUCTURE OF MAINTENANCE AND OVERHAUL DIVISION. ITIS EQUIPPED WITH THE NECESSARY HANGARS, SPECIAL WORKSHOPS, STORAGE ROOMS AND OFFICE BUILDINGS, IN ACCORDANCE WITH NATIONAL AND INTERNATIONAL REGULATIONS AND REQUIREMENTS.

THE SECOND-YEAR STUDENTS OF AERONAUTICAL ENGINEERING WERE GIVEN A REAL TIME EXPOSURE IN THE FIELD OF MAINTENANCE TECHNICAL AND OVERHAUL SECTOR (MTO) ENGINE AND OVERHAUL DIVISION (EOD), COMPONENTS AND OVERHAUL DIVISION (COD) AND AVIONICS AND OVERHAUL DIVISION (AOD). THE STUDENTS WERE ABLE TO HAVE A PROFOUND UNDERSTANDING OF COMPONENTS IN BOEING 787 DREAMLINER AND ITS MAINTENANCE PROCEDURES. CONSIDERING THE AVIONICS PART OF AIRCRAFT, STUDENTS WERE EXPOSED TO THE BLACK BOX IN COD SECTOR AND THE GLASS COCKPIT DISPLAY OF BOEING 787 DREAMLINER.

E TEAM LED BY MR. SUSHILKUMAR, MR. AJITH MAZUMDHAR AND MR. RAMAIAH A.J RETIRED GENERAL NAGER GAVE A DETAILED TOUR OF THE (MTO) MAINTENANCE TECHNICAL AND OVERHAUL DIVISION, MPONENTS OVERHAUL DIVISION, ENGINE OVERHAUL DIVISION AND AVIONICS OVERHAUL DIVISION AIESL. THEY ALSO ADDRESSED THE STUDENTS REGARDING THE CAREER OPPORTUNITIES IN THE LD OF AIRLINES MAINTENANCE.THE VISIT WAS ORGANIZED UNDER THE GUIDANCE OF DR. S K HARANA AND WAS FACILITATED BY PROF.MAHANTAYYA K H. THE STUDENTS WERE ACCOMPANIED PROF. MAHANTAYYA K H, PROF.SOMASHEKAR V, PROF.VARSHA N, PROF. AJAY SAMPATH AND MS. ASWINI T N.

SHORT TERM TRAINING PROGRAM - COMPUTER AIDED DESIGN AND DRAWING.

THE DEPARTMENT OF AERONAUTICAL ENGINEERING CONDUCTED A SHORT-TERM TRAINING PROGRAM (STTP) ON COMPUTER AIDED DESIGN & DRAWING FOR THE SECOND-YEAR STUDENTS ON 07-08 NOV 2019 AT AE'S CAD LAB, MBA BLOCK.

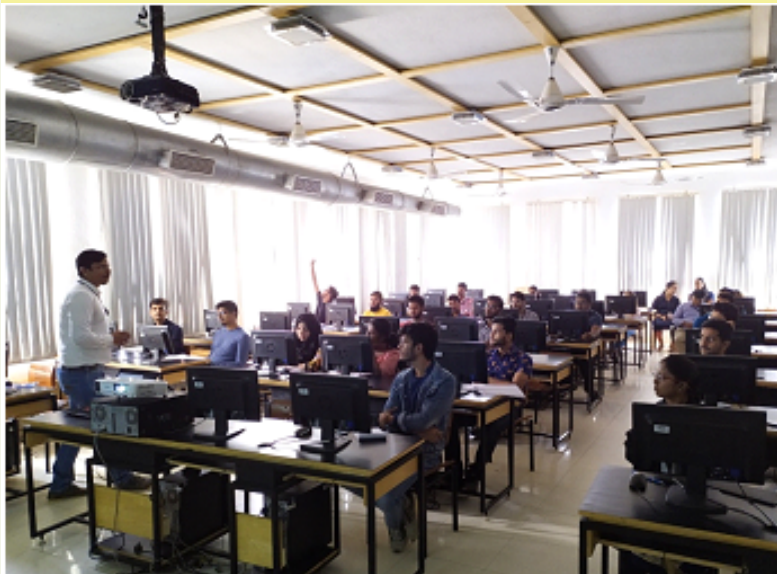
THE OBJECTIVE OF THE STTP WAS TO INTRODUCE ENGINEERING DRAWINGS AND AUTOCAD, TO DRAW BASIC GEOMETRY SHAPES AND DESIGNING 2D & 3D GEOMETRY AND ASSEMBLIES.

SHORT TERM TRAINING PROGRAM -INTERNET OF THINGS.

THE DEPARTMENT OF AERONAUTICAL ENGINEERING CONDUCTED AN IOT-BASED SHORT TERM TRAINING PROGRAM (STTP) FOR THE FINAL AND PRE FINAL YEAR STUDENTS ON 16 -17 NOV 2019 AT AE'S CAD LAB, MBA BLOCK.

THE OBJECTIVE OF THE STTP WAS TO MAKE THE STUDENTS AWARE OF WIRELESS SENSORS, TRANSMISSION OF INFORMATION OVER A NETWORK, INTERNET OF THINGS (IOT) RELATED BASIC ELEMENTS /COMPONENTS TO UNDERSTAND WITH RESPECT TO AN AIRCRAFT MODEL OR A SIMILAR DEVICE (FLYING OR STATIONARY), AND USEFULNESS OF IOT IN AEROSPACE.

THE RESOURCE PERSONNEL'S MR. ABHINAV AND MR. VINAYAK DISCUSSED THE CONCEPTS THROUGH HANDS-ON SESSIONS AND REAL TIME-BASED PROBLEMS.



PEO'S

PEO1: EMPLOYABILITY: GRADUATES OF THE PROGRAMME SHALL HAVE THE ABILITIES REQUIRED

FOR EMPLOYMENT IN THE CORE INDUSTRIES, ACADEMIC FIELDS, AND MULTIDISCIPLINARY FIELDS.

PEO2: ADVANCEMENT: GRADUATES OF THE PROGRAMME SHALL HAVE PROFESSIONAL ADVANCEMENT IN THE MANAGEMENT, ENTREPRENEURSHIP AND INDUSTRIES.
PEO3: CONTRIBUTION: GRADUATES OF THE PROGRAMME SHALL HAVE CREATIVE IDEAS AND THE
POTENTIAL TO SUPPORT THE AVIATION INDUSTRY NEEDS.

PEO4: LIFELONG LEARNING: GRADUATES OF THE PROGRAMME SHALL HAVE A NEVER-ENDING DESIRE TO LEARN AND BE ABLE TO ADAPT NEW TECHNOLOGY DEVELOPMENTS TO THE NEEDS OF
CHANGING INDUSTRIAL ENVIRONMENTS.

PSO'S

1. THE ABILITY TO APPLY AERONAUTICAL ENGINEERING FUNDAMENTALS IN THE SPHERE OF INDUSTRIES SUCH
AS AEROSPACE.

2. THE ABILITY TO TRANSLATE NUMERICAL AND EXPERIMENTAL RESULTS FOR PROPULSION SYSTEMS, STRUCTURAL COMPONENTS, FLIGHT VEHICLE AERODYNAMICS, AND CONTROL SYSTEMS
.

3. THE ABILITY TO ADVANCE IN THE CHOSEN FIELD.
4. THE ABILITY TO BROADEN THE SCOPE OF LEARNING TO INCLUDE SOCIALLY RELEVANT ACTIVITIES.