



KBITS

DASSAULT  
SYSTEMES

# AEROSPACE AND DEFENCE



3DEXPERIENCE®

The Aerospace and Defence industry in India is one of the fastest growing markets in the world. The Defence-manufacturing sector in India is also on the cusp of exponential growth given the focus of Government of India on indigenous manufacturing of Defence equipment. The growth of the sector depends heavily on the availability of industry ready engineers/professionals who can be leveraged for project deployment with minimal on-the-job training. Keeping this in view, the Karnataka Biotechnology & Information Technology Services (KBITS), a Government of Karnataka enterprise along with Visvesvaraya Technological University (VTU) in association with Dassault Systems India Pvt Ltd., is establishing the Centre of Excellence (COE) in Aerospace and Defence with the objective of skill development and providing industry with trained manpower to a thriving Aerospace industry in Bengaluru and other Aerospace hubs such as Belagavi in Karnataka.

The Centre of Excellence (COE), located at VTU, Regional Center Bengaluru, RHCS Layout Annapoorneshwari nagar, Nagarbhavi, Bengaluru, would train graduates and post-graduate engineering students on Aircraft and Aerospace Technologies.

The Centre will offer two certificate courses 1) One month Foundation course and 2) Four month Advanced course that would find acceptability within the aerospace industry. The Centre is expected to roll out both the courses during this year. The COE has plans to upgrade into a Center which will deliver masters-level course over the next 3-5 years. VTU will channelize the students to the Centre from various engineering colleges affiliated to VTU in Karnataka.

The courses offered at Centre of Excellence (COE) are aimed at providing right mix of theory and practical exposure to the students such that at the end of the course, the students would come out with essential knowledge in air vehicle development. These courses will be delivered by Aerospace Industry experts.

Foundation course is aimed at providing a quick overview on Aircraft and Launch Vehicle development cycle. With this the students get perspective about various disciplines involved in Aircraft and Aerospace Technologies. Advanced courses are aimed at giving holistic experience in various disciplines such as structures and general systems (Landing gear, Hydraulics, Fuel System etc.)

## FOUNDATION COURSE IN AIRCRAFT & AEROSPACE ENGINEERING:

### Aerospace Engineering Fundamentals: (1 Month)

Overview in Aerodynamics/Flight Mechanics, Overview of space vehicle concepts | Launch Vehicles and Payloads, Structures | Configuration and Materials, Mechanical Systems | FCS/Hydraulics/Landing Gear/Environmental Control System, Reliability | Quality Assurance & Certification | Avionics | Electrical, Tooling & Manufacturing | Maintenance.



## ADVANCED COURSES IN AIRCRAFT & AEROSPACE ENGINEERING:

### Structural & Equipment Engineering:

**(4 Months)** Metal & Composites Structural Engineering Concepts, Material properties, metal structures, Parts and Assemblies, Ply: Stack up, Draping, Ply drops concepts, Structural analysis concepts, linear, nonlinear, fatigue, vibration and thermal analysis, weight and topology optimization, fastening concepts, tooling and manufacturing concepts, assembly planning and simulation, drilling /riveting/ operations planning, part planning and manufacturing, robotic simulation and ergonomic simulation and projects on the above.



Hydraulics /Electrical engineering concepts, flight controls, environmental control systems, Pressure line, suction line, return line, redundant systems, flow calculations, sizing of components and systems, auxiliary and main landing gear including tyres, wheels, pneumatic, shock absorber, steering and braking systems, radar communication systems and power systems, connectors, junction box, battery systems, motors, wiring diagram, harness definition, from board definition, system calculations, modeling and behavior simulation, control system analysis and validation, pressure and temperature analysis, tooling and manufacturing concepts, Projects on hydraulic actuated rudder, landing gear and harness etc.

Students can now enroll for the 2<sup>nd</sup> Batch in Foundation course for 1month training starting from 3rd Aug 2017. The basic course fee is Rs. 10,000/- and the last date for application is 2nd Aug 2017. The number of students allowed per batch is 25. DD should be made in favor of **Finance Officer, VTU Belagavi.**, to be submitted at the time of admission at the VTU Training Centre, Nagarbhavi, Bangalore. 2 batches will run parallelly every month & students can book their seats in advance by completing the formalities.

All students who are in the final year of Engineering, M. Tech or have just passed out will be eligible for these programs. All engineering streams students are eligible to participate, except Bio-technology & Architecture students.

For more details contact

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For Registration: <http://coeaerospace.vtu.ac.in/>

