

Military Air Solutions

Aeronautical Engineer

Aeronautical Engineers in BAE SYSTEMS directly contribute to much of the specialist engineering activity performed and can provide an invaluable contribution to many of the following disciplines:

Structures – this activity involves conducting stress & strain analysis on key load bearing structures on the aircraft, in addition to other parts of the aircraft to ensure that the airframe is not damaged. This activity can be used to determine key airframe properties from the maximum loads the aircraft can carry to the maximum g forces the aircraft is allowed to do in manoeuvres

Materials Engineering – This activity involves analysing the material properties of the airframe to ensure that the parts are suitable to be placed on the aircraft to withstand the loads that would be applied to it. In addition, activities would include looking for new materials that will be able to perform better than existing ones to help drive improvements to the aircraft performance.

Aerodynamics – This activity involves analysing the airflow around the aircraft to ensure that extrusions in the airframe do not adversely affect the aircrafts performance. It would also involve activities such as modifying aircraft profiles to help bring improvements to aircraft performance.

A degree in Aeronautical/Aerospace Engineering or a suitable Mechanical Engineering degree that has covered those modules would be suitable to progress the engineers career in this role. Specialist engineering degrees covering the individual disciplines would also be suitable for the individual roles.

This background is heavily focused on a specialist engineering role and as such is ideal for those engineers who prefer to apply their university knowledge in the real world. These roles would be heavily technical, as such regular use and knowledge of the methods, formulas and fundamentals of the subject are required. If the engineer has a passion for any of these areas and wants to expand their technical knowledge then this role would suit them.

These roles contribute to the business by being the driving force in the generation of detailed design concepts, technical data and advising the other engineers of the limitations and expectations of the aircraft.

Although focused on specialist roles, the skills acquired from an Aeronautical Engineering background are transferable to other engineering roles such as Systems Engineering.