

BTEC Tech Award in Engineering Keywords

Abrasion	wearing away by frictional contact with another material
Aerospace engineering	the design, development, testing, and production of equipment operating beyond earth's atmosphere e.g. aircraft, spacecraft, missiles
Aesthetic	aesthetic changes to a product make it more attractive but do not have any functional purpose
Alloy	a mixture of metals
Automotive engineering	the design, manufacture and operation of motorcycles, automobiles and trucks
Calibration	the process of comparing the performance of an instrument against a known standard
Communication engineering	the development and operation of communications technology, including telecommunications and computer programming
Composite material	a material that is made from two or more constituents for added strength
Computer aided design (CAD)	software is used by architects, engineers, drafters, artists, and others to create 2D drawings or 3D models
Computer aided manufacture (CAM)	an application technology that uses computer software and machinery to facilitate and automate manufacturing processes.
Electronic engineering	deals with the design, fabrication, and operation of circuits, electronic devices, and systems
Ferrous metal	metals that contain iron, and so are strong and durable
Isometric	a 3D representation of a 2D object
Non-ferrous metals	metals containing no iron, are weaker but more resistant to corrosion
Polymers	long intertwined chains of molecules e.g. plastic, rubbers
Principle of moments	a condition for static equilibrium that states the clockwise and anticlockwise turning moments must be equal
Sustainable product	a product that has minimal impact on the environment throughout each stage of its life cycle
Thermal expansion	increase in the dimensions of a material due to temperature rise
Thermoforming	a manufacturing process where a plastic sheet is heated to a pliable forming temperature, formed to a specific shape in a mold, and trimmed to create a usable product
Thermo-setting polymers	materials which are liquid or malleable at low temperatures, but which change irreversibly to become hard at high temperatures
Unit cost	the cost associated with manufacturing each individual product
Workpiece	the piece of material that is being machined in order to produce a finished component

