

**A-Level Overview Year 1: Product Design**

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| Term | PMJ/TRI | Key Skills / Coursework / PSAs / Deadlines |
| 1&2 | * CAD/CAM induction * Health and Safety * Workshop induction * Induction project * Technical principles – Material properties and performance characteristics * Designing and making principles | Introductory project using range of design skills and manufacturing techniques.  Investigating and analysing existing products.  Completion: 19th December 2017 |
| 3 | * Identification of design problems * Writing a design brief and specification * User group identification * Inclusive design * Human factors | NEA (Controlled Assessment/Coursework) project is introduced.  Students identify possible design projects. They will write their own briefs and specifications for the product they will design and prototype.  Products will be user group or client focussed.  Deadline: 9th February 2018 |
| 4&5 | * Design Development * Sketching * Modelling * Prototyping * CAD/CAM * Interim/ongoing testing and evaluation * Iterative design process (development through on-going experimentation and testing) * Making principles – Manufacture * Making principles – Finishes | The products will be developed using an ‘iterative’ design process. The product solutions will develop using a cyclic process of sketching, modelling, test pieces, process trials, testing and evaluation.  This will be workshop and CAD/CAM focussed.  Deadline: 25th May 2018 |
| 6 | * Final design and prototype proposals * Final design drawings and material/resource preparation. | Production of final prototypes begins, but on-going development will take place.  July 2018 |