Term 1 Multifunctional Storage	Term 2 Electronics in Products	Term 3 NEA
• Design theory • Design communication • Design methods and processes • Materials and their applications: timber • Enhancement of materials • The use of finishes: timber • Digital design and manufacture • Performance characteristics of materials: paper and boards • Health and safety • Responsible design • Design for manufacture and project management • Modern and industrial scales of practice • Forming, redistribution and addition processes • Selecting appropriate tools, equipment and processes	• Technological and cultural changes • Critical analysis and evaluation • Protecting design and intellectual property • National and international standards in product design • Performance characteristics of materials: metal & polymer • Enhancement of materials: metals & polymer • The use of finishes: metal & polymer • Designing for manufacturing, maintenance, repair and disposal • Feasibility studies • Enterprise and marketing in the development of products • Forming, redistribution and addition processes • Selecting appropriate tools, equipment and processes	June 1st

Term 1 Multifunctional Storage	
Design Theory	Design styles and movements Designers and their work
Design Communication	Orthographic Drawing 3D Drawing: isometric, perspective
Design Methods and Processes	Iterative design User centered design Primary and secondary investigation
Materials and their applications: timber	Mechanical properties of materials Classification of materials Composite materials Material disposal Methods for investigating and testing
Enhancement of materials	Wood enhancement Enhancement using preservatives
The use of finishes: Timber	Paper and board finishing Paper and board printing Wood finishing
Digital design and manufacture	Computer aided design Computer aided manufacture Rapid prototyping Electronic data interchange Production, planning and control networking

Performance characteristics of materials: paper and boards	Papers and boards Stock forms Seasoning Toxicity of wood Natural wood and manufacture boards
Health and safety	Safe working practices Health and safety at work act (1974) Control of substances hazardous to health regulations Safety precautions Risk assessment Legislation to protect consumers The trade description act 1968 The British standards institute The safety of Toys
Responsible design	The 6r's of sustainability Renewable energy sources Product miles Circular economy
Design for manufacture and project management	Ensuring accuracy of prototype designs Quality assurance Project management systems Critical path analysis Quality control Nondestructive testing
Modern and industrial scales of practice	Scales of production The use of computer systems Standardised components Sub- assembly
Forming, redistribution and addition processes: timber	Laser cutting Wood processes Wasting processes Forming processes Adhesives Jigs and fixtures
Selecting appropriate tools, equipment and processes	Safe working practices and risk assessments Quantity or manufacture and the implication on manufacturing processes
Term 2 Electronics in products	
Technological and cultural changes	Socio-economic influences Post-First world war and the development of furniture for mass production

	The Second world war, rationing and the development of utility products Contemporary times, fashion and the demand for mass produced furniture and decorative products The impact of microelectronics New materials New methods of manufacture Social, moral and ethical issues Product life cycle
Critical analysis and evaluation	Testing and Evaluating in commercial contexts Use of third-party feedback
Protecting design and intellectual property	Copy right and design rights Patents Registered designs Trademarks and Logos
National and international standards in product design	British standards institution International standards organisation Restriction of hazardous substances directives Battery directive Polymer codes of identification and recycling Packing Directives WEEE directive The EC energy label Eco Labelling Forst stewardship council EU energy star
Performance characteristics of materials: metal & polymer	Production of polymers: fractional distillation Thermoplastics & thermoset polymers Stock forms Biodegradable polymers Composites Smart & modern materials Classification of metals & stock forms
Enhancement of materials: metals & polymer	Polymer enhancement: additives Metal enhancements: hardning/annealing/case hardening/tempering
The use of finishes: metal & polymer	Polymer finishing Metals finishing
Designing for manufacturing, maintenance, repair and disposal	Choice of materials The 6R's of sustainability Upcycling Maintenace

	Disassembly
Feasibility studies	Computer modelling in production planning Feasibility studies and costings Testing prototypes
Enterprise and marketing in the development of products	Customer identification Coporate identity Packaging design Labelling Global marketing Advertising and promotion Product costing, calculation and profit Entrepreneurs and collaborative working with designers
Forming, redistribution and addition processes	Polymer processes Metal processes
Selecting appropriate tools, equipment and processes	Safe working practices and risk assessment Maintaining safety in commercial manufacture Development of designs to be mass produced