**ENGINEERING TRIPLE – GCSE Design & Technology**

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| The subject covers: | * GCSE D&T covers a wide range of activities based on designing and making products that are manufactured using woods, metals and plastics. As well as learning hand skills, you will use a range of industrial processes to shape and form materials into functioning products. * Over the course of two years you will develop a whole range of creative designing and making skills, technical knowledge and understanding relating to 3D Product Design. * The course covers knowledge of woods, metals, plastics, textiles, graphics and systems & controls but specialises in woods, metals and plastics. |
| The subject would be ideal for anyone who in the future wants to: | * Develop an awareness and understanding of real-life experiences in designing and in the developments and opportunities seen in creative manufacturing and engineering industries. |
| You should be interested in: | * The opportunity to engage with creativity and innovation. Understand how you can be enhanced by the application of knowledge from other disciplines across the curriculum such as mathematics, science, art, design, computing and humanities as well as the practical and technical knowledge from Design and Technology. |
| The course is assessed through: | * Principles of Design and Technology Exam (2 hours) 50% of final grade * Iterative Design Challenge (Coursework) 50% of final grade |
| This subject prepares you for further education courses in: | * Level 3 Engineering * A Level Product Design |
| The subject prepares you for careers in: | * Product Design * Engineering * Systems and Control |
| For further information speak with: | * Mrs Steward – Second in Engineering/Head of KS4 * [ssteward@lincolnutc.co.uk](mailto:ssteward@lincolnutc.co.uk) |

**ENGINEERING TRIPLE – Cambridge National Systems & Control (electronics)**

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| The subject covers: | * Systems and control focuses on electronics and design and manufacture of circuit boards (R114), how computers are used in engineering (R115) and the use of programable logic control (R116). * The exam (R113) will cover basic theory of electronics such as the components and their symbols, ohms law & common circuits. |
| The subject would be ideal for anyone who in the future wants to: | * Study any engineering subject at degree level * Undertake an apprenticeship in electrical engineering * Learn more about electronics and programming * Apply subject knowledge gained in Physics |
| You should be interested in: | * Electronics * Programming * Computers * Physics |
| The course is assessed through: | * 3 coursework units (R114, R115 & R116) 75% of final grade * 1hr exam (R113) 25% of final grade |
| This subject prepares you for further education courses in: | * Level 3 Engineering * A Level Physics |
| The subject prepares you for careers in: | * Engineering * Systems and Control. |
| For further information speak with: | * Mr Coster – Engineering * jcoster@lincolnutc.co.uk |

**GCSE Computer Science**

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| The subject covers: | The course is made up of three strands:  Computer systems:  • Introduces students to the central processing unit (CPU), computer memory and storage, data representation, wired and wireless networks, network topologies, system security and system software. It also looks at ethical, legal, cultural, and environmental concerns associated with computer science.  Computational thinking, algorithms, and programming:  • Students apply knowledge and understanding gained in component 01. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic and translators.  Practical programming:  • Students are to be given the opportunity to undertake a programming task during their course of study which allows them to develop their skills to design, write, test and refine programs using the high-level programming language C#. Students will be assessed on these skills during the written examinations. |
| The subject would be ideal for anyone who in the future wants to: | * Have an interest in moving on to further computer science qualifications, and those wanting a good grounding for other subject areas that require problem solving and analytical skills. |
| You should be interested in: | * This course is suited to those with an interest in how computers work, a good grasp of mathematics is a benefit and an interest in problem solving (for example Sudoku) would also be helpful. |
| The course is assessed through: | * Unit 1: Computer Systems: (1 ½ hr Written paper). * Unit 2: Computational thinking (1 ½ hr Written paper). |
| This subject prepares you for further education courses in: | * Computer Science * Robotics * Artificial Intelligence * Electronics |
| The subject prepares you for careers in: | * Many different industries including networking, telecommunications, the armed forces, educational, engineering. Computer scientists can work in most industries as the skill set is versatile and widely used. |
| For further information speak with: | * Mr Bateson - Computer Science   [Dbateson@lincolnutc.co.uk](mailto:Dbateson@lincolnutc.co.uk) |

**Cambridge National Business (Enterprise and Marketing)**

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| The subject covers: | * Unit 1: Exploring Enterprises (Internally Assessed) * Unit 2: Planning for and Running an Enterprise Business (Internally Assessed) * Unit 3: Promotion and Finance for Enterprise (External and Synoptic Assessment) |
| The subject would be ideal for anyone who in the future wants to: | * Have an understanding of how a business enterprise is set-up, operates and is managed. |
| You should be interested in: | * Everything in life involves business. Think about that new top you bought last week and then think of what businesses made it possible for you to be wearing it right now? * The obvious ones are the shop and the manufacturing plant but what about the cotton growers? The label makers? The delivery companies? Health & safety? Even the companies that manage the finances of all those businesses. Thinking about processes and people allows you begin to understand about what studying business is all about. |
| The course is assessed through: | * Two internally assessed units. * One external assessment. |
| This subject prepares you for further education courses in: | * Business, Accountancy and Finance, Advertising and Marketing, Banking and Finance, Business and Enterprise Development, Business and Management, Business Economics, Business Psychology, Business Studies, Economics, Economics and Finance, Events Management, International Business Management, International Tourism Management, Sports Business Management. |
| The subject prepares you for careers in: | * Absolutely anything as it is a fundamental element of the work place; whether working for the government, commercial companies or charity organisations. |
| For further information contact: | Mr Little – Teacher of Business / Head of Sixth Form  [rlittle@lincolnutc.co.uk](mailto:rlittle@lincolnutc.co.uk) |

**GCSE Art & Design**

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| The subject covers: | Exploration into a variety of fine art disciplines ranging from the Renaissance period to contemporary works of today. These include painting, drawing, sculpture, mixed media, installation, and digital work. Students will build their knowledge of significant artists across this timeline, informing their practice by investigating movements, styles and techniques. They are encouraged to explore the use of different mediums and technical processes which will evolve and develop their own art skills and practice.  It is fully expected that students bring their own interests and passions to their art practice. Whilst core development and refinement of practical skills, theoretical understanding and contextual exploration are paramount; the engagement and optimization of imagination and creativity is hugely encouraged. This could include bringing influences from different industrial disciplines such as: design, architecture, fashion, engineering and many more. |
| The subject would be ideal for anyone who in the future wants to: | * Study within a creative field * Work within a creative industry * Work practically * Work independently * Work within a cultural field |
| You should be interested in: | * Artworks and Artists * Design, Architecture, Product Design * Art movements and styles * Culture (contemporary, historical) |
| The course is assessed through: | Learners are expected to develop a portfolio that is internally assessed and externally moderated (120 marks). This represents 60% of the student’s total GCSE. This is comprised of practical work which explores the skills, knowledge and understanding in the learner’s chosen practical and theoretical areas of study. Learners are expected to develop artefacts/ products/ personal outcomes in relation to their chosen areas of study.  The externally set task is an internally assessed and externally moderated non examined assessment (80 marks). This represents 40% of the total GCSE and is set across a 10-hour period. The externally set task offers learners the opportunity to respond to a choice of themes, written and visual starting points and stimuli. It offers an opportunity to provide an extended practical response which allows learners to demonstrate their ability to construct and develop a sustained line of reasoning which is of sufficient length to be coherent, relevant, and logically constructed.  Students are encouraged to select, organize, and present work that represents the best of their achievements in response to assessment objectives. |
| This subject prepares you for further education courses in: | * The Arts * Design * Product Design * Animation * Gaming Industry * Illustration * Fashion * Media studies |
| The subject prepares you for careers in: | * The Arts * Design * Architecture * Education * Advertising * Media |
| For further information speak with: | * Mr Allen – Teacher of Engineering and Art * [hallen@lincolnutc.co.uk](mailto:hallen@lincolnutc.co.uk) |