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| COURSE: | LEVEL 3 BTEC EXTENDED DIPLOMA in ENGINEERING | The end point FOR the extended diploma IN ENGINEERING |
| DETAILS: | * Two Year Course * 15 Units * 3 x External Examinations * 7 x Mandatory | A high-quality Engineering Qualification  The knowledge and skills to enable students to achieve a higher apprenticeship placement or university degree course  A confidence to use their learnt skills and development of knowledge in the engineering field to address future changes and needs within their chosen field and beyond. To enable them to apply their understanding and skills to new experiences |
| INDUSTRY SKILLS | * Creative Problem Solving * Communication * Teamwork * Practical Solutions * Decision Making * Collaboration * Initiative |
| How engineering is being developed, taught and assessed | | |
|  | Curriculum The curriculum design focuses on delivering a wide range of units that are delivered to the students by specialist teachers, including Engineering Maths, Electronics, Mechanical Engineering, CAD/CAM. The delivery and assessment schedule is a two-year programme including assessment windows and examination dates. This is planned in the summer term prior to course start. | |
|  | Problem Based Learning The course is designed using an integrated engineering programme to deliver the content of the units through problem-based assignments. The content and knowledge are delivered with contextualised briefs that enable the students to match to real life experiences. Extra curricula projects are delivered that enhance their ability to apply the skills to different situations, to consolidate their learning and give additional learning opportunities to support their assignments. | |
|  | Links with Industry Partners The links with industry are being continuously developed to incorporate real world challenges into the curriculum projects but also to use the links to increase the contact of our students with organisations and opportunities to work throughout their course with the wider range of stakeholders that they need to be aware of and to help the students to make decisions of the path they wish to take in the next stages of their education. | |
|  | Starting Points Students who arrive at Elutec for KS5 have all had varied experiences. In regard to their education, consideration is made in the planning and support for all the students. The programme is designed to complete initial baseline work to enable the students to showcase the skills they have so we are able to focus on consolidating these and teaching them the skills they have not experienced to ensure that the students are able to fully access their level 3 course. | |
|  | Specification Pearson BTEC Level 3 National Extended Diploma in Engineering  UHA94 RQF 1080 GLH 601/7588/6 | |
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**COURSE CONTENT FOR TWO YEAR PROGRAMME**

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|  | **Mandatory Units** |  |  |  |
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| **Unit** | **Unit Title** | Assessment | **GLH** | **Year** |
| 1 | Engineering Principles | External | 120 | 1 |
| 2 | Delivery of Engineering Processes Safely as a Team | Internal | 60 | 1 |
| 3 | Engineering Product Design and Manufacture | External | 120 | 1 |
| 4 | Applied Commercial and Quality Principles in Engineering | Internal | 60 | 2 |
| 5 | A Specialist Engineering Project | Internal | 60 | 2 |
| 6 | Microcontroller Systems for Engineers | External | 120 | 2 |
| 7 | Calculus to Solve Engineering Problems | Internal | 60 | 2 |
|  |  |  |  |  |
|  | **Additional Units** |  |  |  |
|  |  |  |  |  |
| **Unit** | **Unit Title** |  | **GLH** | **Year** |
| 8 | Further Engineering Maths | Internal | 60 | 2 |
| 10 | Computer Aided Design in Engineering | Internal | 60 | 1 |
| 19 | Electronics Devices and Circuits | Internal | 60 | 2 |
| 22 | Electronic Printed Circuit Board Design and Manufacture | Internal | 60 | 1 |
| 24 | Maintenance of Mechanical Systems | Internal | 60 | 2 |
| 25 | Behaviour of Metallic Materials | Internal | 60 | 1 |
| 41 | Manufacturing Secondary Machining Processes | Internal | 60 | 1 |
| 45 | Additive Manufacture – 3D Printing | Internal | 60 | 1 |