| **Course Title:** | **Engineering (Level 3)** |
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| **Title of qualification to be gained (if any):** | BTEC Nationals Engineering (2016) NQF<br><br>Depending on your chosen programme of study you will work towards the<br><br>• Extended Certificate – 4 units ( equivalent to 1 A Level)<br>• Diploma – 10 units ( equivalent to 2 A Levels)<br>• Extended Diploma – 15 units ( equivalent to 3 A Levels) |
| **Awarding Body (if any):** | Pearson |
| **Essential materials:**<br>Personal Protective equipment (£50 - £100) -the UTC has stock to purchase.<br>Course Book | |

| **Course Aims** |
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| This course is designed to prepare students to meet the increasing demand for professional engineers and aircraft engineers in particular. It provides a pathway into the aviation industry. On completing the course successful students will be eligible to either progress on to higher education programmes or apply for industry apprenticeship schemes in the civil and military sectors. |
| **Course Description** |
| The course consists of mandatory units and optional units; the size and title of the qualification you are accepted for, determines the mix of these units. Mandatory units include Engineering Principles, Delivery of Engineering processes Safely as a Team and Engineering Product Design and Manufacture.<br><br>Some of the units you will study are based on the knowledge requirements of the EASA Part-66 Aircraft Maintenance Licence e.g. Aircraft Flight Principles and Practice. |
| **Entry Requirements** |
| Students require a minimum of 5 A*-C GCSE grades or equivalent including Maths and English. Students wishing to follow our Aeronautical Engineering pathway in year 2 require a minimum grade B in Mathematics and Additional Science. |
| **Who is the course for?** |
| Engineering is at the heart of HAE UTC and is therefore compulsory. Our Engineering programme is designed for young people interested in careers in aeronautical engineering, which are generally found in aircraft maintenance environments or within the aerospace design and development industry.<br><br>All students who meet the minimum entry requirements will study Level 3 Engineering. Students who do not meet the minimum requirements will be considered for Engineering at Level 2. |

| **Main topics covered** |
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| See course description. |
| **Learning Outcomes** |
| Students will develop a broad range of practical and analytical skills required by an Aeronautical Engineer. They will gain the underpinning knowledge and specific skills needed to meet the needs of modern mechanical engineering industries. |
| **Teaching and learning methods used** |
| Learning will include ‘hands on’ practical sessions, lectures, discussions, group work, written activities and the use of technology for modelling, designing, drawing and manufacturing.<br><br>Students will have regular visits to and from our sponsors as part of engineering projects. They will have the opportunity to organise themselves into teams to tackle real life engineering problems associated with the aviation industry. |
| **How your work will be assessed** |
| There will be a mixture of coursework, practical exercises and time constraint assessments. A double rated individual project is included as part of the overall assessment. |
| **Suggested progression routes** |
| The course has a natural progression into a level 4 course at university or an advanced apprenticeship with either one of sponsors or another local or national engineering organisation |
| **Pre-course reading/preparation** |
| Participation in design and technology and/or engineering related activities and general reading about engineering related topics. |