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| **OCR Level 3 Cambridge Technical in Engineering** |
| Unit 10 |
| Unit Recording Sheet |

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| This form should be completed by the centre assessor. Please enter *specific* page numbers where evidence can be found in the portfolio, or where electronic evidence is being submitted, the location of this.  **One** of these sheets should be attached to the assessed work of **each** candidate. | | | | | | | | | | | | |
| Unit Title | Computer Aided Design (CAD) | | | | Unit Code | T/506/7276 | Year | | 2 | 0 | 1 |  |
| Centre Name | |  | | | | Centre Number | |  |  |  |  |  |
| Candidate Name | |  | | | | Candidate Number | | |  |  |  |  |
| Grading Criteria - The Learner can: | | | Grading Criteria achieved (✓) | Teacher comment | | | | | | Page No./Evidence location | | |
| **Pass**  The grading criteria are the Pass requirements for this unit. In order to achieve a Pass grade, all Pass criteria must be achieved. | | |
| **Learning Outcome 1: Be able to produce 3D models using Computer Aided Design (CAD)** | | |  |  | | | | | |  | | |
| **P1:**  Use sketch-based features to create geometry | | |  |  | | | | | |  | | |
| **P2:**  Use applied and pattern features to create solid models | | |  |  | | | | | |  | | |
| **P3:**  Use mathematical calculation to solve reference geometry problems for use within the production of CAD models | | |  |  | | | | | |  | | |
| **Learning Outcome 2:** **Be able to create 3D assemblies of components within a CAD system** | | |  |  | | | | | |  | | |
| **P4:**  Create CAD assemblies with multiple components | | |  |  | | | | | |  | | |
| **P5:**  Apply constraints within assemblies that appropriately define the position or movement of the model | | |  |  | | | | | |  | | |
| Grading Criteria - The Learner can: | | | Grading Criteria achieved (✓) | Teacher comment | | | | | | Page No./Evidence location | | |
| **Pass**  The grading criteria are the Pass requirements for this unit. In order to achieve a Pass grade, all Pass criteria must be achieved. | | |  |  | | | | | |  | | |
| **Learning Outcome 3: Be able to produce 2D CAD engineering drawings** | | |  |  | | | | | |  | | |
| **P6:**  Create a range of views within 2D engineering drawings | | |  |  | | | | | |  | | |
| **P7:**  Create 2D engineering drawings that include appropriate dimensions and annotations | | |  |  | | | | | |  | | |
| **Learning Outcome 4: Understand the use of simulation tools within CAD systems** | | |  |  | | | | | |  | | |
| **P8:**  Explain how simulation tools are used in the design of engineering components, products or systems | | |  |  | | | | | |  | | |

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| Grading Criteria - The Learner can: | Grading Criteria achieved (✓) | Teacher comment | Page No./Evidence location |
| **Merit Criteria**  The grading criteria are the Merit requirements for this unit. In order to achieve a Merit grade, all Merit criteria must be achieved and all Pass criteria must also have been achieved. |
| **Learning Outcome 1: Be able to produce 3D models using Computer Aided Design (CAD)** |  |  |  |
| **M1:**  Use features, projected or intersection geometry and configuration and table-driven features to create geometry |  |  |  |
| **Learning Outcome 2: Be able to create 3D assemblies of components within a CAD system** |  |  |  |
| **M2:**  Create exploded views and animations of 3D CAD assemblies |  |  |  |
| **Learning Outcome 3: Be able to produce 2D CAD engineering drawings** |  |  |  |
| **M3:**  Create detailed engineering drawings of assemblies |  |  |  |
| **Learning Outcome 4: Understand the use of simulation tools within CAD systems** |  |  |  |
| **M4:**  Assess the advantages and disadvantages of using of simulation tools to assist engineering design |  |  |  |

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| Grading Criteria - The Learner can: | Grading Criteria achieved (✓) | Teacher comment | Page No./Evidence location |
| **Distinction Criteria**  The grading criteria are the distinction requirements for this unit. In order to achieve a distinction grade, all distinction criteria must be achieved and all merit and pass criteria must also have been achieved. |
| **Learning Outcome 1: Be able to produce 3D models using Computer Aided Design (CAD)** |  |  |  |
| **D1:**  Use surface modelling techniques to enhance a 3D model |  |  |  |
| **Learning Outcome 3: Be able to produce 2D CAD engineering drawings** |  |  |  |
| **D2:**  Create engineering drawings which conform to British or International standards |  |  |  |
| **OVERALL GRADE (P,M or D)** |  |  |  |

I confirm that:

* the candidate’s work is solely that of the candidate concerned and was conducted under the required conditions as laid down in the qualification handbook;
* internal standardisation has been carried out and that all grades have been correctly recorded and accurately transcribed to the claim being submitted to OCR.

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| **Completed by:** | **Date :** |

Please note: This form may be updated on an annual basis. The current version of this form will be available on the OCR website ([www.ocr.org.uk](http://www.ocr.org.uk)).