

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: ACDB5007 - Computer Aided Engineering	ASSIGNMENT: Report
STUDENT: Jack Frampton	DATE: 20/05/2026

This section details the assessment criteria. The extent to which these are demonstrated by you determines your mark. The marks available for each criterion are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Common Assessment Criteria Applied		Marks available	Marks awarded	% Awarded				
1. Engagement with Literature Skills Use of literature sources in support of you discussions throughout the report								
50-59%: Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied. <i>There is some use of relevant literature to support the background discussion of CAE and impact modelling, particularly in the early sections where key concepts are introduced.</i> <i>However, the overall use of literature is quite limited and lacks depth. Sources are primarily used to support general statements, rather than being used critically within the analysis. There is little attempt to compare the simulation outputs with published work or to use literature to validate or challenge the results obtained.</i> <i>Stronger integration of literature into the results and discussion sections would be needed to demonstrate a higher level of engagement.</i>		10	5.8	58				
2. Knowledge and Understanding Skills Discussion and demonstration of the underlying principles relating to stress/strain calculations and CAE software. Analytical and computational validation could be an effective way of critically appraising these areas.								
60-69%: Knowledge is extensive. Exhibits understanding of the breadth and depth of established views. <i>The report demonstrates a reasonable understanding of CAE concepts, including mesh behaviour, modelling assumptions and the role of validation. The inclusion of an analytical comparison framework is positive and shows awareness of good practice in simulation-based work.</i> <i>There is also a clear understanding of the modelling process and how key parameters such as mesh density and boundary conditions influence results.</i> <i>However, much of the discussion remains at a descriptive level, with limited depth in explaining the underlying mechanics of the simulation (e.g. stress wave behaviour, solver operation). The analytical section is introduced well, but not fully developed in a way that strengthens the technical understanding demonstrated.</i>		30	18.9	63				
3. Cognitive and Intellectual Skills Use of iterative design techniques, based on analysis of prior results to inform future designs. Analysis, interpretation, and review of results to determine the structural limitations of components.								
50-59%: Evidence of some logical, analytical thinking and synthesis. Can analyse new and/or abstract data and situations without guidance. An emerging awareness of different stances and the ability to use evidence to support the argument. Valid conclusions and recommendations where relevant. <i>The report follows a structured investigation, focusing on mesh refinement and boundary condition influence, and there is some evidence of comparative thinking when discussing differences between mesh configurations.</i> <i>However, the overall level of analysis is limited. Much of the discussion focuses on describing what is observed in the results (e.g. increased deformation or stress propagation) without sufficiently explaining why these changes occur or critically evaluating their significance.</i> <i>The analytical comparison approach is introduced as a key part of the methodology, but is not developed in sufficient depth to meaningfully support the conclusions. In addition, there is little exploration of anomalies, limited quantitative evaluation, and no extension of the investigation beyond the basic parameter changes.</i> <i>Overall, this section demonstrates some developing analytical skills, but lacks the depth required for higher marks.</i>		30	17.1	57				
4. Practical Application Skills Use of skills to generate a suitable assembly, with accurate boundary conditions applied. Suitable application of methods to perform structural analysis on components and generate representative results.								
60-69%: A very good application of a range of methods, materials, tools and/or techniques. Very good consideration of the context of the application, with perceptive use of examples, where relevant. Evidence of some innovation and creativity. <i>The practical work demonstrates a competent use of CAE tools, with a clear modelling workflow including geometry setup, material definition, and mesh refinement strategy.</i> <i>The use of a mesh independence study and sphere of influence shows a reasonable understanding of how mesh affects simulation accuracy.</i> <i>However, the practical investigation remains fairly limited in scope. The study could have been extended through more structured comparisons, additional parameter variation, or deeper interrogation of outputs. Greater justification of modelling decisions would also strengthen this section.</i> <i>Overall, the work is competent, but not particularly strong in terms of depth or breadth of application.</i>		20	12	60				
5. Transferable Skills for Life and Professional Practice Quality and presentation of written report.								
60-69%: Can communicate well, confidently and consistently in a suitable format. Can work very well as part of a team, with very good contribution to group activities. Work is coherent and fluent and is well structured and organised. <i>The report is generally well structured, with a clear progression through the study and appropriate use of sectioning. The aims and methodology are clearly outlined, and the work is communicated in a logical manner. Figures support the discussion, although they are not always fully explained or clearly linked to key analytical points.</i> <i>There are some issues with repetition and conciseness, but overall the report is presented to an acceptable standard.</i>		10	6.5	65				
Assignment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)		Late Submission Penalties (tick if appropriate) <table><tr><td>Up to one-week late</td><td></td></tr><tr><td>Over one week late</td><td></td></tr></table>		Up to one-week late		Over one week late		60 %
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