Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Advanced Computational Methods CFD | **ASSIGNMENT**: CFD : MIRA Car

STUDENT: Jack Bridgeland | **DATE: 1/2/19**

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	Percent Awarded
1. Research-informed Literature Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions. (e.g. Background research into CFD techniques and models)			%
60-69%: Inclusion of a wide range of research-informed literature, including sources retrieved independently. Selection of relevant and credible sources. Very good use of referencing conventions, consistently applied. *You have demonstrated a reasonable review of sources to support your modelling approach and understanding of the CFD process. A wider range of sources could have been reviewed and contrasted to give greater confidence in your conclusions.* *Some research of the MIRA reference car, but limited use to validate/critique your results.* *You have conducted some good research from relevant literature to support your modelling methodology. However you could have also used research to support your analysis and help give confidence in your conclusions drawn through data. Comparing literature results to yours for example would help support your critical analysis of results.*	10	6.25	63
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline. (e.g. Justification of initial mesh strategy, mesh refinements and geometry based on comparisons with windtunnel data)			
60-69%: Knowledge is extensive. Exhibits understanding of the breadth and depth of established views. *You demonstrate a good understanding of the CFD process and have used this understanding to develop a valid initial mesh and mesh refinements.* *You have clearly justified your choices with reasoning and applied logical mesh refinements based on the emperical results and other sources.* *Good understanding of the modelling process and the results demonstrated through discussions. You have developed a good model, it is a shame the wind tunnel boundary conditions were only applied retrospectivly and not from the start of the investigation.*	25	16.9	68
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence (e.g. Analysis of results to help create a validated base case, evaluation of methods used, analysis of aerodynamic device)			
70-80%: Thoroughly logical work, supported by evaluated evidence. High quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Strong, persuasive, conclusions, justifiable recommendations *Your analysis is thorough and critical of the results obtained. You have clearly recognised any discrepancies in the simulation results compared to the emperical data and explained these with reasoning.* *You have conducted clear investigations into simulation parameters such as mesh, domain, prisms, and turbulence models. These investigations have led to logical conclusions implemented in your modelling stratergy* *Some excellent analysis conducted. Thorough investigations - it is a shame that these were not conducted on the windtunnel domain as this may have had a impact on the results obtained for these investigations. Results obtained are logical through and you have drawn reasonable conclusions from the data obtained. Mesh quality could have been monitored throughout. Assumptions such as rideheight could have also been investigated.*	30	21	70
4. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems. (e.g. Methodology, use of post processor, selection of component design parameters)			
70-79%: An advanced application of a range of methods, materials, tools and/or techniques. The context of the application is well considered, with extensive use of relevant examples. Application and deployment extend beyond established conventions. Innovation and creativity evident throughout. *You clearly demonstrate that you are proficient with the software and CFD modelling.* *You have used the post processor to visulise and present your results in a clear fashion for conclusions to be drawn.* *Some good use of the software and postprocessing to illustrate your results and findings.*	20	14	70
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation. (e.g. Technical report writing and presentation.)			
70-79%: Can communicate professionally and, confidently in a suitable format. Can work professionally within a team, showing leadership skills as appropriate, managing conflict and meeting obligations. Work is coherent, very fluent and is presented professionally. *A very professional document which has an excellent structure and is a coherent account of the investigation conducted.* *Technical report formatting and presentation is excellent.* *A very good technical report Jack. You have conducted some excellent investigations and generally demonstrate a good understanding and proficiency with CFD.*	15	11.3	75

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)**			
	Up to one-week late		**69.4**	%
	Over one week late			