

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Race Engineering

ASSIGNMENT: Aerodynamic Data

STUDENT: Jack Bridgeland

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. Research of testing procedures, vehicle specifics, aerodynamic principles, testing methods etc)			%
50-59%: Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied. <i>You have conducted some good background reading, but you could have referenced a wider range of literature to support your knowledge of aerodynamics and vehicle handling</i> <i>You have conducted some good research into aerodynamic testing methodologies and used these to inform your methodology</i> <i>A small range of relevant references are included, but a wider ranges of sources could have been reviewed and used to support your methods and conclusions and interrogate established views. Some more of your statements could have been supported by citations with additional reading. Citations could have been used further to support your analysis conclusions.</i>	10	5.75	58
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline. (e.g. Choice of tests and explanation of underlying principles)			
60-69%: Knowledge is extensive. Exhibits understanding of the breadth and depth of established views. <i>You show a good level on understanding of aerodynamics fundamentals and how these may effect vehicle performance in general.</i> <i>You demonstrate some understanding of the methods and techniques applied in the data analysis to characterise the performance of the vehicle.</i> <i>Explanation of testing methods could be more detailed to demonstrate an understanding of the principles, assumptions made and limitations. It is good that you note the optimum setup at the test circuit for this work, may not be optimum elsewhere with valid reasoning. Correction factor for steering could have been explained more clearly.</i>	20	13.5	68
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence (e.g. Analysis of data, findings and use of MATH channels)			
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 <i>Generally you have conducted some good analysis of the data obtained to draw some conclusions of the vehicle aerodynamic characteristics. Conclusions could be more persuasive with a deeper analysis</i> <i>Required math channels are well posed, understood and presented. You could have looked at more advanced math channels to help support your analysis and conclusions.</i> <i>Some good initial observations from straight line testing. No proportionality of aero forces against wing settings could have been noted. You mention higher efficiency is always better but for vehicle performance over a lap this is not always the case. Lap analysis of forces is good, but balance of forces and sensitivity of each setup to dynamic attitude of vehicle could have been explored further</i>	35	23.8	68
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. Test Plan, Use of Motec I2, conclusions drawn from analysis)			
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>You collected a good range of data and test plan is presented. Jusitification of test plan and methods could be more detailed.</i> <i>You draw some reasonable conclusions from the analysis conducted. Further interrogation of the data, and or literature, could have supported these to make them more convincing.</i>	20	13.6	68
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. <i>A very good account of the investigation conducted, could be structured a little more professionally in places.</i> <i>Technical report formatting and presentation generally is very good. A couple of minor errors only.</i> <i>Report is well structured and generally well presented. Your tables should be labelled as tables and equations numbered. Graphs are generally presented well. Some typographical and formatting errors in places. Equations should be numbered. Multiple references to graphs and figures not complete and left with question marks.</i>	15	10.5	70
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 ☐ Over one week late		
	67	%	