

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Race Engineering

ASSIGNMENT: Aerodynamic Data

STUDENT: Gavin Spring-Beynon

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)			%
70-79%: 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. <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 excellent research into testing methods and data analysis techniques to characterise the aerodynamic performance from the data</i> <i>You have clearly read some very relevant sources to support your work and you have cited these effectively to support your work and understanding. You could have reviewed and included a wider range of sources. It is good to see multiple citations used at times.</i>	10	7	70
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)			
80-100%: Highly detailed knowledge and understanding of the main theories/concepts, and a critical awareness of the ambiguities and limitations of knowledge. <i>You demonstrate an excellent depth of knowledge of the aerodynamic principles and the effect of these on the handling of the vehicle</i> <i>You also show an extensive appreciation for the analysis techniques and principles applied</i> <i>You demonstrate a clear understanding of the implications of aerodynamic forces and setup on vehicle performance. You clearly understand the methods applied and the data trends observed. Some of the subtle and unexpected trends could be supported by hypothesis to show a further understanding.</i>	20	15.6	78
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)			
80-100%: Exceptional work, judiciously selected and evaluated evidence. Very high quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Highly persuasive conclusions <i>Excellent analysis conducted with evidence based conclusions drawn through fundamental assessment of the data obtained. 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 graphical presentation of the straight line results could have been included to support the tables included. You could have commented on the non proportionality of wing angles with loads. Good to see the comparison of predicted downforce from coefficient with measured. Some good comments regarding efficiency and balance from circuit tests.</i>	35	27.3	78
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)			
80-100%: Outstanding levels of application and deployment skills. Assimilation and development of cutting edge processes and techniques. <i>Clear test plan which was well run and collected all required data. You explained the rationale and justified the design of the test plan well.</i> <i>Excellent justification of coast down testing method. Excellent conclusions drawn through your detailed analysis. Excellent attempt at mapping the aerodynamics through the graphical representation.</i>	20	17	85
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.)			
80-100%: Can communicate with an exceptionally high level of professionalism. Can work exceptionally well and professionally within a team, showing advanced leadership skills. Work is exceptionally coherent, very fluent and is presented professionally. <i>A very professional document which has an excellent structure and is a coherent account of the investigation conducted.</i> <i>Technical report formatting and presentation is excellent.</i> <i>Excellent report structure and presentation. Minor points but equations should be numbered. You have clearly thought about the presentation of your analysis. Some of the bullet point sections are good. Some repetition of statements</i>	15	12	80
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		
	79	%	