

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Race Engineering	ASSIGNMENT: Aerodynamic Vehicle Testing and analysis (F3 Car)
STUDENT: Ashley Edwards	DATE: 25/4/19

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. Research of testing procedures, vehicle specifics, aerodynamic principles, testing methods etc)			%
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. <i>You have conducted some excellent background reading to support your knowledge and analysis of aerodynamic fundamentals and the effect on the handling balance</i> <i>You have conducted some good research into aerodynamic testing methodologies and used these to inform your methodology</i> <i>Background knowledge supported by some good literature references. Some use of citations to support discussion of results, but this could have been more extensive. References are good but a wider range could have been reviewed.</i>	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. 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 demonstrate an excellent depth of knowledge of the aerodynamic principles and the effect of these on the handling of the vehicle</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>General aerodynamic effect on performance and requirements clearly understood. Equations implemented are presented and understood. Method for Ackerman calibration could be reasoned and explained. Generally it is clear you understand the methods applied and what the plots present.</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>Excellent analysis conducted with evidence based conclusions drawn through fundamental assessment of the data obtained.</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>Good clear analysis of drag plot. Some good observations made, reasons behind these could be presented. Good to see you note reduction in top speed for high drag setup. Correct observations made from lat accel plot - you could have investigated why the mid-mid setup cornered with less accel. CoP movement observations correct. Generally you could have expanded on your analysis.</i>	40	30	75
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>Basic coast down procedure outlined. Test methods could have been explained and justified in more detail. Presentation of plots is clear. Math channel syntax could have been presented along with explanation of setup sheet implementation.</i> <i>Presentation of results and analysis is excellent. You have used advanced techniques available using the MOTEC software to fully support your conclusions</i>	20	13.5	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.)			
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>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 generally is very good. A couple of minor errors only.</i> <i>Subsections could be used to help structure your report further. Results should be presented in the main body, with the discussion of the plots- it is difficult for the reader to flick back and forth. Equations should be presented as equations (using the editor) not strings of text</i>	10	7	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		
	70	%	