

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Race Engineering	ASSIGNMENT: Aerodynamic Vehicle Testing and analysis (F3 Car)
STUDENT: Iwan Thomas	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)				%
30-39%: Poor evidence of reading and/or of reliance on inappropriate sources, and/or indiscriminate use of sources. Referencing conventions used inconsistently. <i>You should have reviewed a much larger range of sources to support your understanding of the principles being investigated by this report.</i> <i>Little/No research into testing techniques.</i> <i>Very limited research carried out. At this level we would expect evidence of a much wider range of reading through citations embedded throughout the report to support your methods, statements and conclusions. You have not demonstrated any reading from non web based sources.</i>		10	3.75	38
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>F3 car varied front wing NOT splitter. Calculations are explained - these could be more explicit if you included equations. You could have justified the calculation of rolling resistance. Generally methods are understood. Understeer calculation method could have been presented.</i>		20	12.5	63
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)				
60-69%: Sound, logical, analytical thinking; synthesis and evaluation. Ability to devise and sustain persuasive arguments, and to review the reliability, validity & significance of evidence. Ability to communicate ideas and evidence accurately and convincingly. Sound, convincing conclusions / recommendations. <i>Some basic analysis of the data obtained, but you could have looked in more detail at secondary interactions between variables</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>Straight line lift calculated correctly - you could have discussed the interaction between front wing and rear loads. Cd calculations are correct. Straight line plot is good - setups on x axis should be labelled more clearly. 'Colour charts' for aero maps are good - trends evident could be discussed/highlighted further. When comparing laps you should use distance on x axis, not time - this has lead to some incorrect statements. You have not included all of the graphs required by the assignment (speed v aero, lat accel v speed). You should have also compared CoP to understeer.</i>		40	25	63
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)				
50-59%: A good and appropriate application of standard methods, materials, tools and/or techniques. Good appreciation of the context of the application, with some use of examples, where relevant. <i>Basic test plans included - test venue justified. Roles allocated. Coast down procedure could be explained further. Some of the results are a little small - difficult to read. You need to refer to the brief to make sure you include all aspects requested.</i> <i>Results presented well with a good use of the MOTEC analysis software evident</i>		20	11.5	58
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 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>Basic report structure. Some graphs could be presented more clearly. Equations should be presented as equations, not text string.</i>		10	6.75	68
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		60 %