

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Race Engineering	ASSIGNMENT: Aerodynamic Vehicle Testing and analysis (F3 Car)
STUDENT: Matthew Perry	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)			%
50-59%: Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied. <i>You have only conducted basic research of aerodynamic principles and handling. We would expect a wider range of background reading to be evident at this level.</i> <i>You have only conducted minimal research into testing techniques</i> <i>Some citations embedded to support statements - make sure you use capital letters for peoples names. You could have researched testing methods in more detail. You should have used research sources throughout, citing to support the methods implemented and conclusions drawn.</i>	10	5	50
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)			
50-59%: Knowledge is accurate with a good understanding of the field of study. <i>You demonstrate a superficial understanding of aerodynamic principles and you could have more clearly indicated how you would have expected the balance and aerodynamic setups to interact</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>Good definition of excel inputs and calculations, however your aero loads include an error - loads should be subtracted from static not added. You should present the equations as equations in a report not standard text. Ackerman steer calibration could have been explained further.</i>	20	11.5	58
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)			
50-59%: Evidence of some logical, analytical thinking and synthesis. Can analyse new and/or abstract data and situations without guidance. An emerging awareness of different stances and the ability to use evidence to support the argument. Valid conclusions and recommendations where relevant. <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>The laps used appear to have different start points making the graphs difficult to read. Fig 2 doesn't make sense - F1R6 shows more drag than F9R9 - you have mentioned this, but you have not thought about why this might be (I would assume this is a mistake in your setup sheet of Cd value). Analysis comments are basic and a little superficial. You should have assessed the results obtained in more detail and compared the handling response for each setup. straight line results could have been analysed in more detail.</i>	40	23	58
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>Calculations and use of motec, setup sheet and excel are good. Your test feedback is included but you have not included your test plan.</i> <i>Basic results presentation with only limited use of the analysis tools available.</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.)			
50-59%: Can communicate effectively in a suitable format, but may have minor errors. Can work effectively as part of a team, with clear contribution to group activities. Mostly coherent work and is in a suitable structure. <i>A good account of the work conducted. Structure shows some room for improvement to portray your ideas in a more succinct manner.</i> <i>Technical report guidelines only generally followed. You need to refer to the guidelines and make sure you present accordingly in future.</i> <i>Some sentences don't read very well - you should proof read your work. You could use subsections to help structure your work further. Equations and figures could be presented more professionally - refer to the tech report guidelines.</i>	10	5	50
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	56	%