

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Vehicle Dynamics	ASSIGNMENT: Steady state load transfer and aerodynamic loading
STUDENT: Simon Ellis Williams	DATE: 25/3/19

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>Only basic research into the relationships between weight transfer, roll stiffness distribution and handling balance.</i> <i>You have only conducted basic research to support your aerodynamics knowledge. We would expect a wider range of background reading to be evident at this level.</i> <i>Some basic aerodynamic testing research, this could have been more detailed. Splitter and wing research is good but could have been specifically related to the application. A wider range of sources should have been cited, from academic sources (not websites). Good to see citations informing expected outcomes / trends for results</i>	10	5.5	55
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 show a good basic level on understanding of aerodynamics and load transfer, and how these may effect vehicle performance in general. This could be more detailed and acknowledge the interaction of setup choices.</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>Some statements a little generic and not necessarily true (heavy vehicle at front results in understeer - this is also setup and tyre dependant). Good to see coast down method explained and related equations presented (the values could have been labelled on the graph e.g. a2?). Calculations for WTs not presented clearly - you have not discussed the assumptions or limitations of these.</i>	25	13.8	55
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 characterising load transfer with respect to setup. You should have more critically assessed the theories applied and used the data to devise more persuasive arguments.</i> <i>Generally you have conducted some good analysis of the data obtained to draw some conclusions on the vehicles aerodynamic performance. Conclusions could be more persuasive with further analysis of trends</i> <i>The expected outcome and observations structure is very good! The analysis of lift is good, but you could have also commented on the power of the splitter compared to the wing and the trends not observed which one may expect - wing stall. Whilst you have recognised some spurious data, your reasoning for these has not recognised the limitations of the methods proposed. Understeer not calculated.</i>	25	14.4	57.5
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>Required Math channels are present and appear to be generally defined correctly.</i> <i>Basic results presentation with only limited use of the analysis tools available.</i> <i>Good to see setup sheet explained. Results indicate some potential errors in math channels (WT section) - although these do appear to generally be reasonably constructed. Some of the presentation of results could be clearer - basic weight transfer plotted but not defined. Understeer not calculated.</i>	25	13.1	52.5
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 generally followed but some inconsistencies. You need to refer to the guidelines and make sure you present accordingly in future.</i> <i>Equations should be numbered. Subsections should be numbered. Some graph axes labels could be clearer (wing angle, 1,2,3?). Graphs should be labelled and captioned consistently - later graphs not labelled.</i>	15	8.25	55
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		55 %
	Over one week late		