

MARKING CRITERIA AND STUDENT FEEDBACK

MODULE: Vehicle Dynamics	ASSIGNMENT: Steady state load transfer and aerodynamic loading
STUDENT: Harry Farnhill	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>Some 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 specific to the expected trends and test methods to be evident at this level.</i> <i>Evidence of some supporting reading to support general understanding of aerodynamic and load transfer principles, but you could have embedded citations in your analysis to support or contradict conclusions and the trends observed.</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.</i> <i>You have not demonstrated you clearly appreciate the analysis techniques and theory</i> <i>Whilst you demonstrate a good basic understanding of aerodynamic principles, you aerodynamic calculations conducted not explained or presented in report.</i>	25	14.4	57.5
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>Some basic analysis of the aerodynamic data obtained, but you could have looked in more detail at relationships between your setup and resulting aerodynamic loads and distribution. Some illogical or interesting trends not fully investigated</i> <i>Graphs presented show data which would be much clearer if ordered logically. Basic conclusions from data are correct, but trends could have been interrogated in more detail - linearity of changes, which device is most powerful? 3D graphs of 2D data aren't appropriate. You have highlighted some discrepancies but not given possible reasons for these (roll angle hay is there a difference? - Tyre deflection). Some generic comments incorrect - you need to be precise with conclusions. No assessment of vehicle balance.</i>	25	13.8	55
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>An attempt to include the required math channels but these are incomplete and/or incorrectly defined</i> <i>Basic results presentation with limited use of the analysis tools available.</i>	25	12.5	50
<i>A good attempt at the math channels however there appear to be some errors - theoretical steer calibration should be based on correction factor (this shouldn't change but you are calculating it dynamically). You have also calculated predicted elastic WT based on gyro roll angle - this should be predicted roll angle.WT sf etc not defined. No understeer math channel</i>			
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>Sections and subsections should be numbered. Report structure is not logical - You have results presented with no explanation and before the methodology applied. Figures should be captioned.#</i>	15	8.63	57.5
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		
	55	%	