



MODULE SPECIFICATION

Part 1: Information			
Module Title	Advanced Chassis		
Module Code	UFMEVE-15-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Module type:	Standard		
Pre-requisites	Automotive Technology 2019-20		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See Learning Outcomes.</p> <p>Outline Syllabus: The syllabus includes:</p> <p>Revision of steady-state cornering, understeer, oversteer and yaw. Roll, weight transfer, load transfer. Ride, pitch and bounce (quarter car model, half car model). Transient behaviour. Applying dynamics modelling techniques to vehicle chassis performance. Race car design and setup.</p> <p>Teaching and Learning Methods: This module is delivered through a series of lecture/tutorial sessions (lecturials) and is supported by sessions in the vehicle simulation lab to allow students to apply the knowledge gained in this module.</p> <p>Scheduled learning includes lectures, tutorials and sessions in the vehicle simulation lab.</p> <p>Independent learning includes hours engaged with essential reading, assignment preparation and completion including problem sheets, exam revision.</p>

STUDENT AND ACADEMIC SERVICES

Contact: 36 hours
 Assimilation and Skill development: 47 hours
 Coursework: 40 hours
 Exam preparation: 27 hours
 Total: 150 hours

Part 3: Assessment

The two hour end of semester exam is used to independently test ability of the students in controlled conditions.

The written assignment (including the development of a vehicle model) is designed to assess the students' abilities in understanding the various aspects of vehicle dynamics and how the parameters affect the vehicle's handling performance. This includes evaluation of their competencies in critically evaluation and analysing results within the context of vehicle dynamics.

First Sit Components	Final Assessment	Element weighting	Description
Report - Component B		50 %	Written report
Examination - Component A	✓	50 %	Exam (2 hours)
Resit Components	Final Assessment	Element weighting	Description
Report - Component B		50 %	Written report
Examination - Component A	✓	50 %	Exam (2 hours)

Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
	Module Learning Outcomes	Reference
	Design and undertake substantial investigations to address significant areas of theory and practice in chassis design, performance and analysis	MO1
	Select and critically evaluate advanced methodological approaches in analysis of vehicle dynamics	MO2
	Apply both analytical and practical methods to the analysis of vehicle chassis engineering problems	MO3
	Demonstration and critically evaluate current theoretical and methodological approaches through use of professional literature	MO4
	Act with initiative in decision making within professional and given guidelines	MO5
	Communicate effectively using professional engineering terms	MO6
Contact Hours	Independent Study Hours:	
	Independent study/self-guided study	114

STUDENT AND ACADEMIC SERVICES

	Total Independent Study Hours:	114
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	36
	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/modules/ufmeve-15-m.html</p>	

Part 5: Contributes Towards

This module contributes towards the following programmes of study: