MODULE DESCRIPTION FORM

ME518 Topics in Automotive Engineering

Module Registrar: Prof D Mackenzie
d.mackenzie@strath.ac.uk
Taught To (Course): Cohorts for whom class is compulsory

Other Lecturers Involved: Dr B Keating
Mr C Johnstone
Credit Weighting: 10
Semester: 1 and 2
Assumed Prerequisites: 16263 Automotive Systems 1
Compulsory class
Academic Level: 5

Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Tutorial</th>
<th>Laboratory</th>
<th>Groupwork</th>
<th>External</th>
<th>Online</th>
<th>Project</th>
<th>Assignments</th>
<th>Private Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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Educational Aim

This module aims to allow students to gain a deeper understanding of the state of the art in Automobile design and manufacture and to develop an insight into future developments, through self-study and seminar presentations.

Learning Outcomes

On completion of the module the student is expected to be able to

LO1 Demonstrate in depth knowledge of key engineering concepts and applications in the design and manufacture of motor vehicles
LO2 Appreciate in detail the range of alternative design solutions employed in practice and possible future scenarios for motor vehicle development.

Syllabus

Topics will be selected from inter alia:

- Materials for Automotive Applications
- Manufacturing methods in the Automotive Industry
- Automobile Aerodynamics
- Advanced and innovative motive power units
- Power train configuration and design

Assessment of Learning Outcomes

Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

LO1
C1 Demonstrate in detail how specific engineering concepts influence and determine vehicle design.
C2 Perform advanced design/performance calculations relating to vehicle structures, dynamics and thermodynamics as required.

LO2
C1 Communicate (verbal & written) understanding of standard, advanced and potential future design solutions.

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

12 Principles of Assessment and Feedback
(on Learning & Teaching web pages: www.strath.ac.uk/learnteach/teaching/staff/assessfeedback/12principles/)

Students will receive individual Coursework marks and written feedback 2 weeks after the submission date. The subsequent tutorial session will review the assignment topics and general positive and negative aspects of overall class response (with respect to the Criteria above). Following this, individual students requiring further feedback will arrange a personal meeting with the lecturer.
Assessment Method(s) Including Percentage Breakdown and Duration of Exams

<table>
<thead>
<tr>
<th>Examinations</th>
<th>Courseworks</th>
<th>Presentations</th>
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<tbody>
<tr>
<td>Number</td>
<td>Month(s)</td>
<td>Duration</td>
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<tr>
<td>2</td>
<td>80%</td>
<td>2</td>
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<tr>
<td>LO1, LO2</td>
<td>LO1, LO2</td>
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Indicate which learning outcomes (LO1, LO2 etc) are to be assessed by exam/coursework/project as required.

Coursework / Submissions deadlines: Week 8 semesters 1 & 2

Resit Assessment Procedures: Submission of additional assignment prior to the commencement of the August examination diet.

PLEASE NOTE:
Students need to gain a summative mark of 50% to pass the module. Students who fail the module at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of coursework.

Recommended Reading

N/A

Additional Student Feedback
(Please specify details of when additional feedback will be provided)

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Session:2014-15

Approved:

Course Director Signature: [Signature]

Date of Last Modifications: 12 August 2014
# MODULE TIMETABLE

**Module Code:** ME518  
**Module Title:** TOPICS IN AUTOMOTIVE ENGINEERING

**Brief Description of Assessment:**  
Mini-project coursework, 1 per semester, plus associated presentation.

**Assessment Timing:-**  
Indicate on the table below the start/submission dates for each assignment/project and the timing of each exam/assessment(s).

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<tr>
<th>Semester One</th>
<th>WK1</th>
<th>WK2</th>
<th>WK3</th>
<th>WK4</th>
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<th>WK6</th>
<th>WK7</th>
<th>WK8</th>
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<th>WK10</th>
<th>WK11</th>
<th>WK12</th>
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<th>WK9</th>
<th>WK10</th>
<th>WK11</th>
<th>WK12</th>
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