

STUDY SCHEME 2011 - 2015									
BACHELOR OF ENGINEERING (MECHANICAL)									
Department of Mechanical and Manufacturing Engineering									
Faculty of Engineering, Universiti Putra Malaysia									
<i>K – Credit Hours, S – Lectures, A – Practical/Laboratory</i>									
<i>First Semester</i>					<i>Second Semester</i>				
COURSE CODE	COURSE NAME	K	S	A	COURSE CODE	COURSE NAME	K	S	A
<b>Year I</b>									
EMM 3102	Statics	2	2	0	EMM 3104	Dynamics	3	3	0
EMM 3120	Engineering Materials I	2	2	0	EMM 3108	Strength of Materials I	3	2	1
EMM 3590	Engineering Drawing and Geometric Modelling	3	1	2	EMM 3114	Computer Programming for Mechanical Engineers	3	2	1
EMM 3802	Engineering Materials and Statics Laboratory	1	0	1	EEE 3100	Electric and Electronic Technology	3	2	1
ECC 3001	Engineering Mathematics I	3	3	0	ECC 3002	Engineering Mathematics II	3	3	0
BBI 2420	Oral Interactive Skills	3	2	1	BBI 2421	General Writing Skills	3	2	1
SKP 2101	Malaysian Nationhood	3	3	0					
		<b>17</b>	<b>13</b>	<b>4</b>			<b>18</b>	<b>14</b>	<b>4</b>
<b>Year 2</b>									
EMM 3110	Thermodynamics I	3	3	0	EMM 3204	Green Technology	2	2	0
EMM 3302	Fluid Mechanics	3	3	0	EMM 3210	Thermodynamics II	3	2	1
EMM 3408	Strength of Materials II	3	2	1	EMM 3304	Applied Fluid Mechanics	3	2	1
EMM 3712	Manufacturing Process I	3	2	1	EMM 3602	Industrial Management I	3	3	0
ECC 3003	Engineering Mathematics III	3	3	0	EMM 3704	Manufacturing Automation I	3	2	1
SKP 2203	Islamic Civilisation and Asian Civilisation	2	2	0	EMM 3804	Thermodynamics and Fluid Mechanics Laboratory	1	0	1
Q****	Co-curriculum	1	0	1	ECC 3004	Engineering Statistics	3	3	0
		<b>18</b>	<b>15</b>	<b>3</b>			<b>18</b>	<b>14</b>	<b>4</b>
<b>Year 3</b>									
EMM 3212	Heat Transfer	3	2	1	EMM 3508	Engineering Design II	3	1	2
EMM 3502	Control Engineering	3	2	1	EMM 3514	Numerical Methods	3	2	1
EMM 3504	Mechanics of Machines	3	2	1	EMM 3522	Mechanical Vibrations	3	2	1
EMM 3506	Engineering Design I	3	2	1	EMM 3604	Cost Accounting and Engineering Economy	3	3	0
MGM 3180	Basic Entrepreneurship	3	2	1	EMM 3608	Industrial Safety and Health	3	3	0
PRT 2008	Agriculture and Man	2	2	0	SKP 2204	Ethnic Relations	2	2	0
					Q****	Co-curriculum	1	0	1
		<b>17</b>	<b>12</b>	<b>5</b>			<b>18</b>	<b>13</b>	<b>5</b>
<b>Year 4</b>									
EMM 3516	Integrated Design	3	1	2	EMM 4***	Technical Elective III <sup>3</sup>	3	3	0
EMM 4***	Technical Elective I <sup>3</sup>	3	3	0	EMM 4***	Technical Elective IV <sup>3</sup>	3	3	0
EMM 4***	Technical Elective II <sup>3</sup>	3	3	0	EMM 4999B	Final Year Academic Project	4	0	4
EMM 4901	Industrial Training <sup>2</sup>	5	0	5	ECV 3001	Engineers and Society	3	2	1
EMM 4999A	Final Year Academic Project	2	0	2					
		<b>16</b>	<b>7</b>	<b>9</b>			<b>13</b>	<b>8</b>	<b>5</b>

Note:

<sup>1</sup> Q\*\*\*\* Credit co-curriculum can be taken at any semester throughout the study period

<sup>2</sup> EMM 4901 Industrial Training is conducted for 10 weeks during semester break of Semester 2 Year 3

<sup>3</sup> EMM 4\*\*\* (Technical Elective) are based on elective courses.

Offering of the courses is made according to current needs and circumstances. . Students have the freedom to choose whichever course they desire.

Total Credits (Courses)	130
Industrial Training	5
<b>Grand Total</b>	<b>135</b>

<b>TECHNICAL ELECTIVE COURSES</b> <b>BACHELOR OF ENGINEERING (MECHANICAL)</b>
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Offering of technical elective courses is made according to the current needs and circumstances. Students have the freedom to choose whichever course they desire.

First Semester					Second Semester				
COURSE CODE	COURSE NAME	K	S	A	COURSE CODE	COURSE NAME	K	S	A
EMM 4206	Thermal Power	3	3	0	EMM 4204	Turbomachinery	3	3	0
EMM 4304	Fluid Power	3	3	0	EMM 4208	Internal Combustion Engine	3	3	0
EMM 4402	Inelastic Analysis	3	3	0	EMM 4302	Tribology	3	3	0
EMM 4404	Fabrication and Characterisation of Composite Materials	3	3	0	EMM 4406	Stress Analysis Techniques	3	3	0
EMM 4408	Strength of Materials III	3	3	0	EMM 4506	Natural Gas Vehicle Design	3	3	0
EMM 4504	Vehicle Body Analysis	3	3	0	EMM 4604	Manufacturing Planning and Control System	3	3	0
EMM 4606	Total Quality Control	3	3	0	EMM 4702	Manufacturing Process II	3	3	0
EMM 4706	Manufacturing System Design	3	3	0	EMM 4704	Manufacturing Automation II	3	3	0
EMM 4710	Tool Engineering	3	3	0	EMM 4708	Human Factors Engineering	3	3	0
EMM 4716	Systems Modelling and Analysis	3	3	0	EMM 4712	Operations Research	3	3	0
EMM 4502	Noise, Vibration and Harshness in Vehicles (NVH)	3	3	0	EMM 4508	Robot Dynamics	3	3	0
EMM 4410	Engineering Materials II	3	3	0	EMM 4714	Powder Metallurgy	3	3	0