

STUDY SCHEME 2021-2025					
BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS					
Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, Universiti Putra Malaysia					
FIRST SEMESTER			SECOND SEMESTER		
CODE	COURSE	CREDIT	CODE	COURSE	CREDIT
<b>YEAR 1</b>					
EMM3116	Statics	3(3+0)	EMM3118	Dynamics	3(3+0)
EMM3124	Engineering Materials	3(3+0)	ENG3002	Engineering Mathematics II	3(3+0)
ENG3001	Engineering Mathematics I	3(3+0)	ENG3004	Engineering Statistics	3(3+0)
ENG3101	Engineering Seminar	1(0+1)	ENG3103	Project Management	3(3+0)
ENG3201	Computer Aided Engineering Drawing	3(1+2)	ENG3202	Computer Programming	3(2+1)
PRT2009	Agriculture and Life	2(1+1)	LPE2403	Academic Interaction and Presentation	3(3+0)
QKXXXX	Credited Co-curriculum	1(0+1)	FEM2313	Integrity and Anti-corruption	1(1+0)
*SKP3112	Philosophy and Current Issues	2(2+0)*	QKXXXX	Credited Co-curriculum	1(0+1)
**SKP3113/ **SKP3123	Philosophy and Current Issues in Civil Society/ Internalization of Ethics and Civilization in Malaysia	3(3+0)**			
<b>TOTAL</b>		<b>18*   19**</b>	<b>TOTAL</b>		<b>20</b>
<b>YEAR 2</b>					
EMM3226	Thermodynamics I	3(3+0)	EMM3228	Thermodynamics II	3(3+0)
EMM3316	Fluid Mechanics I	3(3+0)	EMM3318	Fluid Mechanics II	3(3+0)
EMM3416	Strength of Materials I	3(3+0)	EMM3418	Strength of Materials II	3(3+0)
EMM3724	Manufacturing Technology and Processes	3(3+0)	EMM3538	Computer Aided Engineering	3(2+1)
EMM3820	Fabrication Technology	1(0+1)	EMM3824	Mechanical Engineering Laboratory II	1(0+1)
EMM3822	Mechanical Engineering Laboratory I	1(0+1)	ENG3102	Engineering Economy	3(3+0)
LPE2503	Academic Writing	3(3+0)	*SKP3122	Internalization of Ethics and Civilization	2(2+0)*
			**LPM2100	Malay Language Communication	2(2+0)**
<b>TOTAL</b>		<b>17</b>	<b>TOTAL</b>		<b>18*   18**</b>
<b>YEAR 3</b>					
EEE3031	Electrical Power and Machines	3(2+1)	EMM3536	Mechanical Vibration	3(3+0)
EMM3530	Engineering Design	4(2+2)	EMM3540	Computer Aided Design and Manufacture	3(2+1)
EMM3532	Instrumentation and Control	3(3+0)	EMM3542	Mechatronics	3(3+0)
EMM3534	Mechanics of Machines	3(3+0)	EMM3828	Mechanical Engineering Laboratory IV	1(0+1)
EMM3618	Industrial Safety and Health	3(3+0)	EMM4948	Mechanical Engineering Integrated Design Project	4(0+4)
EMM3826	Mechanical Engineering Laboratory III	1(0+1)	ENG3104	The Engineer and Society	3(2+1)
<b>TOTAL</b>		<b>17</b>	<b>TOTAL</b>		<b>17</b>
<b>YEAR 4</b>					
EMM4XXX	Elective I	3(3+0)	EMM4XXX	Elective III	3(3+0)
EMM4XXX	Elective II	3(3+0)	EMM4XXX	Elective IV	3(3+0)
EMM3726	Reverse Engineering and Rapid Prototyping	3(3+0)	ENG4949B	Bachelor's Project	4(0+4)
ENG4901	Industrial Training <sup>1</sup>	5(0+5)	*SKP2101	Malaysian Nationhood	3(3+0)*
ENG4949A	Bachelor's Project	2(0+2)	**FEM2401	Malaysian Politics and Society	2(2+0)**
<b>TOTAL</b>		<b>16</b>	<b>TOTAL</b>		<b>13*   12**</b>
<b>GRAND TOTAL OF THE CREDITS</b>					<b>136</b>

SELECTION OF THE ELECTIVE COURSES					
FIRST SEMESTER			SECOND SEMESTER		
CODE	COURSE	CREDIT	CODE	COURSE	CREDIT
EMM4214	Buiding Environment and Services	3(3+0)	EMM4216	Internal Combustion Engine	3(3+0)
EMM4218	Heat Transfer	3(3+0)	EMM4304	Tribology	3(3+0)
EMM4414	Fabrication and Characterization of Composite Materials	3(3+0)	EMM4416	Advanced Engineering Materials	3(3+0)
EMM4514	Robot Dynamics	3(3+0)	EMM4610	Total Quality Control	3(3+0)
EMM4516	Finite Element Method in Engineering Analysis	3(3+0)	EMM4612	Manufacturing Planning and Control Systems	3(3+0)
EMM4518	Human Responses to Vibration	3(3+0)	EMM4722	Operations Research	3(3+0)
EMM4520	Condition based Monitoring	3(3+0)	EMM4726	Manufacturing System Design	3(3+0)
EMM4720	Tooling Engineering	3(3+0)	EMM4730	Powder Metallurgy	3(3+0)
EMM4728	Smart Manufacturing	3(3+0)			

**Nota:**

<sup>1</sup>ENG4901 Industrial Training run for 10 weeks during the semester break in Second Semester, Year 3.

\* for local students

\*\* for international students