

**BEng (Industrial & Systems Engineering)**

Students Matriculated in AY2020/2021

**Recommended Semester Schedule for JC Intake  
Research-Focused Pathway (RfP)**

Modules		MCs	Modules		MCs
<b>Semester 1</b>			<b>Semester 2</b>		
MA1505	Mathematics I	4	MA1508E	Linear Algebra	4
CS1010E	Programming Methodology	4	ST2334	Probability & Statistics	4
IE1111R	Industrial & Systems Engineering Principles & Practice I	4	IE2111	Industrial & Systems Engineering Principles & Practice II	4
PC1431 or PC1432	Basket of Science Modules	4	MLE1010	Materials Engineering Principles & Practice	4
GEQxxxx		4	GERxxxx		4
<b>Sub-total</b>		<b>20</b>	<b>Sub-total</b>		<b>20</b>

<b>Semester 3</b>			<b>Semester 4</b>		
IE2110	Operations Research I	4	IE2100	Probability Models with Applications	4
IE3101	Statistics for Engineering Applications	4	IE2141	Systems Thinking and Dynamics	4
EE2211	Introduction to Machine Learning	4	EG2401A	Engineering Professionalism	2
EG1311	Design and Make	4		ISE Electives 1	4
ES2531	Critical Thinking & Writing	4		GE/UEM	4
				GE/UEM	4
<b>Sub-total</b>		<b>20</b>	<b>Sub-total</b>		<b>22</b>

<b>Semester 5</b>			<b>Semester 6</b>		
IE3100R	Systems Design Project	4	IE3100R	Systems Design Project	4
IE3110R	Simulation	4		ISE Electives 3	4
	ISE Electives 2	4		GE/UEM-UROP	4
	GE/UEM	4		GE/UEM	4
	GE/UEM	4		GE/UEM	4
<b>Sub-total</b>		<b>20</b>	<b>Sub-total</b>		<b>20</b>

<b>Special Term</b>		
EG3612	Vacation Internship Program	6
<b>Sub-total</b>		<b>6</b>

<b>Semester 7</b>			<b>Semester 8</b>		
IE4100R	BEng Dissertation	4	IE4100R	BEng Dissertation	4
IE5xxx	Basket of Modules for RfP	4	IE5xxx	Basket of Modules for RfP	4
	GE/UEM	4		GE/UEM	4
	GE/UEM	4		GE/UEM	4
<b>Sub-total</b>		<b>16</b>	<b>Sub-total</b>		<b>16</b>

Note:

- Students are required to read one General Education Modules (GE) from each of 5 pillars: Human and Cultures (H&C), Quantitative Reasoning (QR), Thinking and Expression (T&E), Singapore Studies (SS) and Asking Questions (AQ).
- Internship is optional for poly intake students and students in the following special programmes: DDPs, CDPs, GEP & CSP. The modular credits for the internship will become 'Free Electives' i.e., Unrestricted Electives (UE).
- Students should not read more than 60 MCs of level 1000 modules towards their degree requirements.
- This is just a recommended schedule. It is subject to change without prior notice.