



## **BIOMEDICAL ENGINEERING – SPECIALISATION + ELECTIVE**

<b>FOR COHORT AY2021/2022 ONWARDS</b>	<b>MC</b>
<b>Common Curriculum</b>	<b>60</b>
Singapore Studies	4
Cultures and Connections	4
Communities and Engagement	4
Critical Thinking and Writing	4
Programming Methodology	4
Quantitative Reasoning with Data	4
Design Thinking	4
Design and Make	4
Systems Thinking and Dynamics	4
Introduction to Machine Learning	4
Liveable Cities	4
Creating Narratives	4
Fundamentals of Project Management	4
B.Eng Dissertation <sup>1</sup> (double-counted)	8
<b>Major Requirements</b>	<b>60</b>
Engineering Calculus	2
Introduction to Numerical Methods for Engineers	2
Uncertainty Analysis for Engineers	2
Linear Algebra with Differential Equations	2
Engineering Professionalism	2
Industrial Attachment	10
Biomedical Engineering Principles and Practice I	4
Biomedical Engineering Principles and Practice II	4
Biochemistry and Biomaterials for Bioengineers	4
Bioengineering Data Analysis	4
Quantitative Physiology for Bioengineers	4
Fundamentals of Biomechanics	4
Fundamentals of Biosignals and Bioinstrumentation	4
Biomedical Engineering Design	4
Technical Electives (double-counted)	8
<b>Specialisation in Robotics</b>	<b>20</b>
Robotics in Rehabilitation (double-counted)	4*
Intelligent Medical Robotics (double-counted)	4*
Soft Robotics (double-counted)	4*
Robot Mechanics and Control	4
Human-Robot Interaction	4
<b>OR</b>	
Robotics in Rehabilitation (double-counted)	4*
Intelligent Medical Robotics (double-counted)	4*
Soft Robotics (double-counted)	4*
B.Eng Dissertation <sup>1</sup> (double-counted)	8*
<b>Other Unrestricted Electives</b>	<b>32 OR 40</b>
<b>TOTAL</b>	<b>160</b>

<sup>1</sup> If the topic of the B.Eng dissertation is in the area of robotics, the 8 MCs can be double-counted towards the 20 MCs required for the specialisation in robotics.

\* Double-counted

