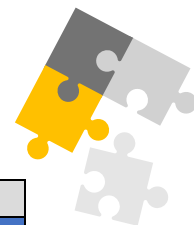


# **MECHANICAL ENGINEERING – MINORS IN QUANTITATIVE FINANCE AND ECONOMICS (CAREER IN FINANCE)**



FOR COHORT AY2021/2022 ONWARDS	MC
<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 <u>or</u> Mechanical Systems Design	8
<b>Major Requirements</b>	<b>60</b>
Mathematics I	4
Differential Equations for Engineering	2
Linear Algebra and Differential Equations	2
Engineering Professionalism	2
Industrial Attachment	10
Engineering Principles & Practice I	4
Engineering Principles & Practice II	4
Strength of Materials	4
Engineering Thermodynamics	4
Fluids Mechanics I	4
Feedback Control Systems	4
Mechanics of Machines	4
Manufacturing Processes	4
Engineering Innovation and Modelling	4
Technical Elective	4
<b>Minor in Quantitative Finance</b> (See <a href="#">here</a> for latest detailed minor requirements.)	<b>20</b>
Introduction to Quantitative Finance	4
Basic Applied Mathematics* (can be replaced by other modules – see above link)	4
Fundamentals of Quantitative Finance	4
Investment Instruments and Risk Management	4
Advanced Mathematics in Quantitative Finance / Regression Analysis / Econometrics I / Investment Analysis and Portfolio Management / Financial Modelling	4
<b>Minor in Economics</b> (See <a href="#">here</a> for latest detailed minor requirements.)	<b>20</b>
At least 20MCs of EC-coded or EC-recognised (max 4 MCs) modules including:	
Introduction to Economic Analysis	4
Microeconomic Analysis I and/or Macroeconomic Analysis I	4 or 8
<b>TOTAL</b>	<b>160</b>

**List of Technical Elective modules:**

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| <ul style="list-style-type: none"><li>• ME2114 Mechanics of Material</li><li>• ME2135 Intermediate Fluid Mechanics</li><li>• ME2143 Sensors and Actuators</li><li>• ME3122 Heat Transfer</li><li>• ME3211 Mechanics of Solids</li><li>• ME3221 Sustainable Energy Conversion</li><li>• ME3241 Microprocessor Applications</li><li>• ME3242 Automation</li><li>• ME3243 Robotic System Design</li><li>• ME3252 Materials Engineering Principles for Engineers</li><li>• ME3261 Computer-Aided Design and Manufacturing</li><li>• ME3263 Design for Manufacturing and Assembly</li><li>• ME3281 Microsystems Design and Applications</li><li>• ME3291 Numerical Methods in Engineering</li><li>• ME4105 Specialisation Study Module (Offshore Oil &amp; Gas Technology)</li><li>• ME4212 Aircraft Structures</li></ul> | <ul style="list-style-type: none"><li>• ME4223 Thermal Environmental Engineering</li><li>• ME4225 Applied Heat Transfer</li><li>• ME4226 Energy and Thermal Systems</li><li>• ME4227 Internal Combustion Engines</li><li>• ME4231 Aerodynamics</li><li>• ME4232 Small Aircraft and Unmanned Aerial Vehicles</li><li>• ME4233 Computational Methods in Fluid Mechanics</li><li>• ME4241 Aircraft Performance and Stability</li><li>• ME4242 Soft Robotics</li><li>• ME4245 Robot Mechanics and Control</li><li>• ME4253 Biomaterials Engineering</li><li>• ME4255 Materials Failure</li><li>• ME4261 Tool Engineering</li><li>• ME4262 Automation in Manufacturing</li><li>• ME4263 Fundamentals of Product Development</li><li>• ME4291 Finite Element Analysis</li></ul> |
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