MECHANICAL ENGINEERING – SECOND MAJOR IN MANAGEMENT

FOR COHORT AY2021/2022 ONWARDS	MC
Common Curriculum	**60**
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
Major Requirements	**60**
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
Second Major in Management (See [here](#) for latest detailed major requirements.)	**40**
Complete 10 Business modules from a basket of modules:	
4 level-1000 modules from:	16
• Organisational Behaviour / Industrial & Organisational Psychology	
• Accounting for Decision Makers / Financial Accounting for Economists	
• Principles of Marketing	
• Legal Environment of Business / Principles of Law for Real Estate	
• Managerial Economics / Introduction to Economic Analysis / Principles of Economics	
• Decision Analytics using Spreadsheets	
6 level-2000/3000 modules in the areas of:	24
• Business Analytics • Innovation & Entrepreneurship	
• Business Economics • Leadership & Human Capital Management	
• Finance • Operations & Supply Chain Management	
• Marketing	
TOTAL	**160**

List of Technical Elective modules:

- ME2114 Mechanics of Material
- ME2135 Intermediate Fluid Mechanics
- ME2143 Sensors and Actuators
- ME3122 Heat Transfer
- ME3211 Mechanics of Solids
- ME3221 Sustainable Energy Conversion
- ME3241 Microprocessor Applications
- ME3242 Automation
- ME3243 Robotic System Design
- ME3252 Materials Engineering Principles for Engineers
- ME3261 Computer-Aided Design and Manufacturing
- ME3263 Design for Manufacturing and Assembly
- ME3281 Microsystems Design and Applications
- ME3291 Numerical Methods in Engineering
- ME4105 Specialisation Study Module (Offshore Oil & Gas Technology)
- ME4212 Aircraft Structures
- ME4223 Thermal Environmental Engineering
- ME4225 Applied Heat Transfer
- ME4226 Energy and Thermal Systems
- ME4227 Internal Combustion Engines
- ME4231 Aerodynamics
- ME4232 Small Aircraft and Unmanned Aerial Vehicles
- ME4233 Computational Methods in Fluid Mechanics
- ME4241 Aircraft Performance and Stability
- ME4242 Soft Robotics
- ME4245 Robot Mechanics and Control
- ME4253 Biomaterials Engineering
- ME4255 Materials Failure
- ME4261 Tool Engineering
- ME4262 Automation in Manufacturing
- ME4263 Fundamentals of Product Development
- ME4291 Finite Element Analysis