

**Bachelor of Engineering (Mechanical Engineering)
with Second Major in Innovation & Design**

Cohort 2016/2017

Modular Requirements	Modular Credits (MCs)
University Level Requirements	
General education modules:	
• Quantitative Reasoning (GER1000)	4
• Thinking & Expression (GET)	4
• Human Cultures (GEH)	4
• Singapore Studies (GES)	4
• Asking Questions (GEQ1000)	4
Sub-total for University Level Requirements	20
Programme Requirements	
Faculty requirements:	
• ES1531 Critical Thinking & Writing ¹ (or equivalent) <i>(Double-counted for Second Major in Innovation & Design)</i>	4
• ES2331 Communicating Engineering ¹	4
• EG2401 Engineering Professionalism	3
• ES1xxx English ²	-
Year 1 and core modules:	
• EG1111 Engineering Principles & Practice I	6
• EG1112 Engineering Principles & Practice II	6
• MA1505 Mathematics I	4
• MA1506 Mathematics II	4
• PC1431 Physics IE	4
• CS1010E Programming Methodology	4
• ME2112 Strength of Materials	4
• ME2121 Engineering Thermodynamics	4
• ME2134 Fluid Mechanics I	4
• ME2142 Feedback Control Systems	4
• ME2151 Principles of Mechanical Engineering Materials	4
• ME3112 Mechanics of Machines	4
• ME3162 Manufacturing Processes	4
ME technical electives ^{3,5}	31
ME design and project modules:	
• ME2102 Engineering Innovation & Modelling	4
• EG3301R DCP Project ³ (over 2 consecutive semesters) <i>(Double-counted for Second Major in Innovation & Design and replaces ME3103 Mechanical Systems Design)</i>	12
EG3612 Vacation Internship Programme (VIP) ^{3,4}	6
Sub-total for Programme Requirements	120
Unrestricted Elective Modules (UEM)	
• Group A module for Second Major	4
• Group B module for Second Major	4
• Group C modules for Second Major – Innovation & Enterprise electives	12
• EG4301 DCP Dissertation <u>or</u> EG4301A Ideas to Start-up ⁵ (over 2 consecutive semesters) <i>(replaces ME4101A BEng Dissertation)</i>	12
Sub-total for Unrestricted Elective Modules	32
Total	172

Innovation & Design Programme
Faculty of Engineering

Notes:

- ¹ Students in USP, UTRP, and RVRC may read an equivalent module (e.g. ES1501X Academic Expository Writing) in lieu of EG1531 and/or ES2331.
- ² Students who have not passed or been exempted from the Qualifying English Test at the point of admission will have to read ES1000 and/or ES1103. ES1103 carries 4 MCs which may be counted as UEM.
- ³ Students in this Second Major are allowed to complete EG3612 (6 MCs) in lieu of EG3611 (12 MCs).

The 12 MCs for EG3301R are mapped by 6 MCs from ME3103 and 6 MCs from the replacement of EG3611 (12 MCs) with EG3612 (6 MCs).

Students may also opt to do EG3611 (12 MCs) in lieu of EG3612 (6 MCs) and 6 MCs of technical electives.
- ⁴ EG3612 (VIP) is optional for poly-intake students and those in the following special programmes: double degree programmes (DDP), concurrent degree programmes (CDP), Chemical Sciences Programme (CSP), and Global Engineering Programme (GEP).
- ⁵ Students in this Second Major are allowed to complete additional technical electives (8 MCs) in lieu of ME4101A (8 MCs).