

## AY2021-22 MTEC CGPA Computation

### BEng (Materials Engineering) and BSocSci (Economics) (Students admitted from AY2021/2022)

| List of courses that contribute towards BSocSci (Econs) |          |           |                                                     |   | AU Load                                                                         |
|---------------------------------------------------------|----------|-----------|-----------------------------------------------------|---|---------------------------------------------------------------------------------|
| Discipline Requirement                                  | Core     | HE1001    | Microeconomic I                                     | 3 | 32 AU                                                                           |
|                                                         |          | HE1002    | Macroeconomic I                                     | 3 |                                                                                 |
|                                                         |          | HE2003    | Econometrics I                                      | 3 |                                                                                 |
|                                                         |          | HE2001    | Microeconomic II                                    | 3 |                                                                                 |
|                                                         |          | HE2002    | Macroeconomic II                                    | 3 |                                                                                 |
|                                                         |          | HE3001    | Microeconomic III                                   | 3 |                                                                                 |
|                                                         |          | HE3002    | Macroeconomic III                                   | 3 |                                                                                 |
|                                                         |          | HE3003    | Econometrics II                                     | 3 |                                                                                 |
|                                                         |          | MS4089    | Final Year Project                                  | 8 |                                                                                 |
|                                                         | Major PE | MH1820    | Introduction to Probability and Statistical Methods | 3 | 33 AU                                                                           |
|                                                         |          | HE3xxx    | Econs PE1                                           | 3 |                                                                                 |
|                                                         |          | HE3xxx    | Econs PE2                                           | 3 |                                                                                 |
|                                                         |          | HE3xxx    | Econs PE3                                           | 3 |                                                                                 |
|                                                         |          | HE3xxx    | Econs PE4                                           | 3 |                                                                                 |
|                                                         |          | HE3xxx    | Econs PE5                                           | 3 |                                                                                 |
|                                                         |          | HE3xxx    | Econs PE6                                           | 3 |                                                                                 |
|                                                         |          | HE4xxx    | Econs PE7                                           | 4 |                                                                                 |
|                                                         |          | HE4xxx    | Econs PE8                                           | 4 |                                                                                 |
|                                                         |          | HE4xxx    | Econs PE9                                           | 4 |                                                                                 |
|                                                         | BDE      | PH1011/12 | Physics**                                           | 3 | 9 AU from Year 1 Engineering graded Core courses that yield the highest CGPA.   |
|                                                         |          | MH1810    | Mathematics I                                       | 3 |                                                                                 |
|                                                         |          | EG1001    | Engineer & Society                                  | 2 |                                                                                 |
|                                                         |          | MS1008    | Introduction to Computational Thinking              | 3 |                                                                                 |
|                                                         |          | MS1013    | Materials Chemistry I                               | 2 |                                                                                 |
|                                                         |          | MS1014    | Materials Chemistry II                              | 2 |                                                                                 |
|                                                         |          | MS1017    | Introduction to Materials Science                   | 2 |                                                                                 |
|                                                         |          | MS1018    | Properties of Materials                             | 2 |                                                                                 |
|                                                         |          | MS1016    | Thermodynamics of Materials                         | 3 |                                                                                 |
|                                                         |          | MH2811    | Mathematics II                                      | 3 | 21 AU from Year 2 and 3 Engineering graded courses that yield the highest CGPA. |
|                                                         |          | MS2012    | Introduction to Manufacturing                       | 3 |                                                                                 |
|                                                         |          | MS2013    | Introduction to Polymer Science                     | 3 |                                                                                 |
|                                                         |          | MS2083    | Polymer Lab                                         | 1 |                                                                                 |
|                                                         |          | MS2014    | Materials Structure and Defects                     | 3 |                                                                                 |
|                                                         |          | MS2015    | Mechanical Behaviour of Materials                   | 3 |                                                                                 |
|                                                         |          | MS2016    | Phase Transformation and Kinetics                   | 3 |                                                                                 |
|                                                         |          | MS2018    | Electronic & Magnetic Properties of Materials       | 3 |                                                                                 |
|                                                         |          | MS3011    | Metallic & Ceramic Materials                        | 3 |                                                                                 |
|                                                         |          | MS3012    | Micro/Nanoelectronic Materials Processing           | 3 |                                                                                 |
|                                                         |          | MS3013    | Corrosion of Materials                              | 3 |                                                                                 |
|                                                         |          | MS3082    | Design Lab                                          | 1 |                                                                                 |
|                                                         |          | MS3014    | Analysis of Materials                               | 3 | + 5 AU (PA only)                                                                |
|                                                         |          | MS3015    | Materials Aspect in Design                          | 3 |                                                                                 |
| CFICC                                                   |          | CC0003    | Ethics & Civics in a Multi-Cultural World           | 2 | 17 AU                                                                           |

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|---------------------------------------------------------|--------------------------|----------------|-------------------------------------------------------------|---------|------------------------------------------------|
|                                                         | <b>Common Core</b>       | CC0005         | Healthy Living & Mental Wellbeing                           | 3       |                                                |
|                                                         |                          | CC0001         | Inquiry and Communication in the Interdisciplinary World    | 2       |                                                |
|                                                         |                          | CC0002         | Navigating the Digital World                                | 2       |                                                |
|                                                         |                          | CC0007         | Science & Technology for Humanity                           | 3       |                                                |
|                                                         |                          | ML0004         | Career and Entrepreneurial Development for the Future World | 3       |                                                |
|                                                         |                          | CC0006         | Sustainability: Society, Economy & Environment              | 2       |                                                |
|                                                         | <b>Foundational Core</b> | MS0003         | Introduction to Data Science and Artificial Intelligence    | 3       | <b>15 AU (PI Option)<br/>10 AU (PA Option)</b> |
|                                                         |                          | HW0288         | Effective Communication 2                                   | 2       |                                                |
|                                                         |                          | MS3099/MS3096^ | Professional Internship/Professional Attachment             | 10/5    |                                                |
|                                                         | <b>TOTAL</b>             |                |                                                             |         | <b>127 AU</b>                                  |

\*\* Students without 'A' level Physics will take PH1012 Physics A (4AU)

^ Students from U23 intake onwards will do MS3920 Professional Internship or MS3910 Professional Attachment instead