

## Four-Year Study Plan of Applied Mathematics Programme (2026 cohort)

Rev 20260723

Rev 202607/23

| Course Code                                      | Course Title                                                                                                                                                                                          | Year One |        |       | Year Two |       |        | Year Three |       | Year Four      |       |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|-------|----------|-------|--------|------------|-------|----------------|-------|
|                                                  |                                                                                                                                                                                                       | Sem 1    | Winter | Sem 2 | Sem 1    | Sem 2 | Summer | Sem 1      | Sem 2 | Sem 1          | Sem 2 |
| I. Major Required Courses (51 Units)             |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |                |       |
| MATH1053                                         | Linear Algebra I                                                                                                                                                                                      | 3        |        |       |          |       |        |            |       |                |       |
| MATH1073                                         | Calculus I                                                                                                                                                                                            | 3        |        |       |          |       |        |            |       |                |       |
| COMP1023                                         | Foundations of C Programming                                                                                                                                                                          |          |        | 3     |          |       |        |            |       |                |       |
| MATH1063                                         | Linear Algebra II                                                                                                                                                                                     |          |        | 3     |          |       |        |            |       |                |       |
| MATH1083                                         | Calculus II                                                                                                                                                                                           |          |        | 3     |          |       |        |            |       |                |       |
| COMP2003                                         | Data Structures and Algorithms                                                                                                                                                                        |          |        |       | 3        |       |        |            |       |                |       |
| MATH2043                                         | Ordinary Differential Equations                                                                                                                                                                       |          |        |       | 3        |       |        |            |       |                |       |
| MATH2053                                         | Mathematical Analysis                                                                                                                                                                                 |          |        |       | 3        |       |        |            |       |                |       |
| STAT2063                                         | Probability Theory                                                                                                                                                                                    |          |        |       | 3        |       |        |            |       |                |       |
| MATH4083                                         | Numerical Analysis                                                                                                                                                                                    |          |        |       |          | 3     |        |            |       |                |       |
| OR4023                                           | Optimization                                                                                                                                                                                          |          |        |       |          | 3     |        |            |       |                |       |
| STAT3083                                         | Applied Statistics                                                                                                                                                                                    |          |        |       |          | 3     |        |            |       |                |       |
| MATH4093                                         | Complex Analysis                                                                                                                                                                                      |          |        |       |          |       |        | 3          |       |                |       |
| MATH4103                                         | Mathematical Modelling                                                                                                                                                                                |          |        |       |          |       |        | 3          |       |                |       |
| MATH3033                                         | Partial Differential Equations                                                                                                                                                                        |          |        |       |          |       |        |            | 3     |                |       |
| MATH3163                                         | Real Analysis                                                                                                                                                                                         |          |        |       |          |       |        |            | 3     |                |       |
| MATH4123                                         | Final Year Project I (MATH)                                                                                                                                                                           |          |        |       |          |       |        |            |       | 3 <sup>③</sup> |       |
| II. Major Elective Courses (15 Units)            |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |                |       |
| ME01 ME02 ME03 ME04 ME05                         |                                                                                                                                                                                                       |          |        |       |          | 3     |        | 3          | 3     | 3              | 3     |
| III. University Core Courses (37 Units)          |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |                |       |
| UCLC1003                                         | University Chinese                                                                                                                                                                                    |          |        | 3     |          |       |        |            |       |                |       |
| UCLC1013                                         | English for Academic Purposes I                                                                                                                                                                       | 3        |        |       |          |       |        |            |       |                |       |
| UCLC1023                                         | English for Academic Purposes II                                                                                                                                                                      |          |        | 3     |          |       |        |            |       |                |       |
| UCAI1003                                         | Introduction to AI Literacy                                                                                                                                                                           | 3        |        |       |          |       |        |            |       |                |       |
| CHI1103                                          | Introduction to Modern Social Theories                                                                                                                                                                |          |        |       | 3        |       |        |            |       |                |       |
| CHI1203                                          | Morality and Foundations of Law                                                                                                                                                                       |          |        | 3     |          |       |        |            |       |                |       |
| CHI1063                                          | Chinese Culture and Modern China                                                                                                                                                                      |          |        |       |          | 3     |        |            |       |                |       |
| CHI1073                                          | Contemporary Chinese Society and Thought I                                                                                                                                                            | 3        |        |       |          |       |        |            |       |                |       |
| CHI1253                                          | Contemporary Chinese Society and Thought II                                                                                                                                                           |          |        |       |          | 3     |        |            |       |                |       |
| CHI1193                                          | Contemporary World and China <sup>①</sup>                                                                                                                                                             |          |        |       |          |       | 2      |            |       |                |       |
| MT1003                                           | Military Training                                                                                                                                                                                     |          | 2      |       |          |       |        |            |       |                |       |
| WPEX1013                                         | Emotional Intelligence                                                                                                                                                                                |          |        | 1     |          |       |        |            |       |                |       |
| WPEX2013                                         | Experiential Arts <sup>②</sup>                                                                                                                                                                        |          |        |       |          | 1     |        |            |       |                |       |
| WPEX2023/<br>WPEX2033                            | Voluntary Service <sup>②</sup> , or Environmental Awareness <sup>②</sup>                                                                                                                              |          |        |       | 1        |       |        |            |       |                |       |
| UCLH1XX3                                         | Healthy Lifestyle <sup>②</sup>                                                                                                                                                                        | 1        |        | 1     |          | 1     |        |            |       |                |       |
| IV. General Education Courses (18 Units)         |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |                |       |
| Level 1<br>Foundational<br>Courses               | History and Civilization <sup>②</sup>                                                                                                                                                                 |          |        |       | 3        |       |        |            |       |                |       |
|                                                  | Quantitative Reasoning <sup>②</sup>                                                                                                                                                                   | 3        |        |       |          |       |        |            |       |                |       |
|                                                  | Values and the Meaning of Life <sup>③</sup>                                                                                                                                                           |          |        | 3     |          |       |        |            |       |                |       |
| Level 2<br>Interdisciplinary<br>Thematic Courses | Culture, Creativity and Innovation <sup>③</sup> , or Science,<br>Technology and Society <sup>③</sup> , or Sustainable Communities <sup>③</sup>                                                        |          |        |       |          |       |        | 3          | 3     |                |       |
| Level 3<br>GE Capstone<br>Courses                | Service-Learning Course <sup>③</sup> , or Service Leadership<br>Education Course <sup>③</sup> , or Experiential Learning Course <sup>③</sup> ,<br>or Interdisciplinary Independent Study <sup>③</sup> |          |        |       |          |       |        |            |       |                | 3     |
| V. Free Elective Courses (27 Units)              |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |                |       |
| FE01 FE02 FE03 FE04 FE05 FE06 FE07 FE08 FE09     |                                                                                                                                                                                                       |          |        |       | 3        |       |        | 9          | 6     | 9              |       |
| Total Units: 148                                 |                                                                                                                                                                                                       | 19       | 2      | 23    | 22       | 20    | 2      | 21         | 18    | 15             | 6     |

① This 2-unit course requires student to attend at least 10 lectures within his/her first two years of study.

② This denotes a course category in which a list of courses may be developed for students' selection. Students are expected to refer to the Online Course Selection System for courses available under each category.

③ Students who continue with the final year project in the second semester of Year 4 should register MATH4163 Final Year Project II (MATH) as a major elective during the Online Course Selection (or Course Add/Drop) period.

④ Students are required to take GFVM1033 Ethics in An Era of Artificial Intelligence and Robotics or GFVM1043 Ethics in Daily Life and Life Sciences under this category.

# Four-Year Study Plan of Math plus Applied Mathematics Programme (2026 cohort)

Rev 20260723

Rev 202607/23

| Course Code                                      | Course Title                                                                                                                                                                                          | Year One |        |       | Year Two |       |        | Year Three |       | Year Four |                 |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|-------|----------|-------|--------|------------|-------|-----------|-----------------|
|                                                  |                                                                                                                                                                                                       | Sem 1    | Winter | Sem 2 | Sem 1    | Sem 2 | Summer | Sem 1      | Sem 2 | Sem 1     | Sem 2           |
| I. Major Required Courses (51 Units)             |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |           |                 |
| MATH1053 <sup>①*</sup>                           | Linear Algebra I                                                                                                                                                                                      | 3        |        |       |          |       |        |            |       |           |                 |
| MATH1073 <sup>①*</sup>                           | Calculus I                                                                                                                                                                                            | 3        |        |       |          |       |        |            |       |           |                 |
| COMP1023 <sup>①*</sup>                           | Foundations of C Programming                                                                                                                                                                          | 3        |        |       |          |       |        |            |       |           |                 |
| MATH1063 <sup>①*</sup>                           | Linear Algebra II                                                                                                                                                                                     |          |        | 3     |          |       |        |            |       |           |                 |
| MATH1083 <sup>①*</sup>                           | Calculus II                                                                                                                                                                                           |          |        | 3     |          |       |        |            |       |           |                 |
| COMP2003                                         | Data Structures and Algorithms                                                                                                                                                                        |          |        |       | 3        |       |        |            |       |           |                 |
| MATH2043                                         | Ordinary Differential Equations                                                                                                                                                                       |          |        |       | 3        |       |        |            |       |           |                 |
| MATH2053                                         | Mathematical Analysis                                                                                                                                                                                 |          |        |       | 3        |       |        |            |       |           |                 |
| STAT2063 <sup>①*</sup>                           | Probability Theory                                                                                                                                                                                    |          |        |       | 3        |       |        |            |       |           |                 |
| MATH4083                                         | Numerical Analysis                                                                                                                                                                                    |          |        |       |          | 3     |        |            |       |           |                 |
| OR4023                                           | Optimization                                                                                                                                                                                          |          |        |       |          | 3     |        |            |       |           |                 |
| STAT3083                                         | Applied Statistics                                                                                                                                                                                    |          |        |       |          | 3     |        |            |       |           |                 |
| MATH4093                                         | Complex Analysis                                                                                                                                                                                      |          |        |       |          |       |        | 3          |       |           |                 |
| MATH4103                                         | Mathematical Modelling                                                                                                                                                                                |          |        |       |          |       |        | 3          |       |           |                 |
| MATH3033                                         | Partial Differential Equations                                                                                                                                                                        |          |        |       |          |       |        |            | 3     |           |                 |
| MATH3163                                         | Real Analysis                                                                                                                                                                                         |          |        |       |          |       |        |            | 3     |           |                 |
| MATH4123 <sup>①*</sup>                           | Final Year Project I (MATH)                                                                                                                                                                           |          |        |       |          |       |        |            |       | 3         |                 |
| II. Major Elective Courses (15 Units)            |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |           |                 |
| ME01 ME02 ME03 ME04 ME05                         |                                                                                                                                                                                                       |          |        |       |          | 3     |        | 3          | 3     | 3         | 3 <sup>①*</sup> |
| III. University Core Courses (37 Units)          |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |           |                 |
| UCLC1003                                         | University Chinese                                                                                                                                                                                    |          |        | 3     |          |       |        |            |       |           |                 |
| UCLC1013                                         | English for Academic Purposes I                                                                                                                                                                       | 3        |        |       |          |       |        |            |       |           |                 |
| UCLC1023                                         | English for Academic Purposes II                                                                                                                                                                      |          |        | 3     |          |       |        |            |       |           |                 |
| UCAI1003                                         | Introduction to AI Literacy                                                                                                                                                                           | 3        |        |       |          |       |        |            |       |           |                 |
| CHII103                                          | Introduction to Modern Social Theories                                                                                                                                                                |          |        |       | 3        |       |        |            |       |           |                 |
| CHII203                                          | Morality and Foundations of Law                                                                                                                                                                       |          |        | 3     |          |       |        |            |       |           |                 |
| CHII063                                          | Chinese Culture and Modern China                                                                                                                                                                      |          |        |       |          | 3     |        |            |       |           |                 |
| CHII073                                          | Contemporary Chinese Society and Thought I                                                                                                                                                            | 3        |        |       |          |       |        |            |       |           |                 |
| CHII253                                          | Contemporary Chinese Society and Thought II                                                                                                                                                           |          |        |       |          | 3     |        |            |       |           |                 |
| CHII193                                          | Contemporary World and China <sup>①</sup>                                                                                                                                                             |          |        |       |          |       | 2      |            |       |           |                 |
| MT1003                                           | Military Training                                                                                                                                                                                     |          | 2      |       |          |       |        |            |       |           |                 |
| WPEX1013                                         | Emotional Intelligence                                                                                                                                                                                |          |        | 1     |          |       |        |            |       |           |                 |
| WPEX2013                                         | Experiential Arts <sup>②</sup>                                                                                                                                                                        |          |        |       |          | 1     |        |            |       |           |                 |
| WPEX2023/<br>WPEX2033                            | Voluntary Service <sup>②</sup> , or Environmental Awareness <sup>②</sup>                                                                                                                              |          |        |       | 1        |       |        |            |       |           |                 |
| UHL1XX3                                          | Healthy Lifestyle <sup>②</sup>                                                                                                                                                                        | 1        |        | 1     |          | 1     |        |            |       |           |                 |
| IV. General Education Courses (18 Units)         |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |           |                 |
| Level 1<br>Foundational<br>Courses               | History and Civilization <sup>②</sup>                                                                                                                                                                 |          |        |       | 3        |       |        |            |       |           |                 |
|                                                  | Quantitative Reasoning <sup>②</sup>                                                                                                                                                                   |          |        | 3     |          |       |        |            |       |           |                 |
|                                                  | Values and the Meaning of Life <sup>②</sup>                                                                                                                                                           |          |        | 3     |          |       |        |            |       |           |                 |
| Level 2<br>Interdisciplinary<br>Thematic Courses | Culture, Creativity and Innovation <sup>②</sup> , or Science,<br>Technology and Society <sup>②</sup> , or Sustainable Communities <sup>②</sup>                                                        |          |        |       |          |       |        | 3          | 3     |           |                 |
| Level 3<br>GE Capstone<br>Courses                | Service-Learning Course <sup>②</sup> , or Service Leadership<br>Education Course <sup>②</sup> , or Experiential Learning Course <sup>②</sup> ,<br>or Interdisciplinary Independent Study <sup>②</sup> |          |        |       |          |       |        |            |       |           | 3               |
| V. Free Elective Courses (27 Units)              |                                                                                                                                                                                                       |          |        |       |          |       |        |            |       |           |                 |
| FE01 FE02 FE03 FE04 FE05 FE06 FE07 FE08 FE09     |                                                                                                                                                                                                       |          |        |       | 3        |       |        | 9          | 6     | 9         |                 |
| Total Units: 148                                 |                                                                                                                                                                                                       | 19       | 2      | 23    | 22       | 20    | 2      | 21         | 18    | 15        | 6               |

① This 2-unit course requires student to attend at least 10 lectures within his/her first two years of study.

② This denotes a course category in which a list of courses may be developed for students' selection. Students are expected to refer to the Online Course Selection System for courses available under each category.

③ Students are required to take GFVM1033 Ethics in An Era of Artificial Intelligence and Robotics or GFVM1043 Ethics in Daily Life and Life Sciences under this category.

\* **Common Core Course (Required) - CCR**

④ Students are required to take MATH1053 Linear Algebra I under MR.

⑤ Students are required to take MATH1073 Calculus I under MR.

⑥ Students are required to take COMP1023 Foundations of C Programming under MR.

⑦ Students are required to take MATH1063 Linear Algebra II under MR.

⑧ Students are required to take MATH1083 Calculus II under MR.

⑨ Students are required to take STAT2063 Probability Theory under MR.

⑩ Students are required to take MATH4123 Final Year Project I (MATH) under MR.

⑪ Students are required to take MATH4163 Final Year Project II (MATH) under ME.

# **Common Core Course (Elective) - CCE:**

The CCE courses listed below are strongly recommended for students of the Math plus Applied Mathematics Programme.

|          |                                   |    |
|----------|-----------------------------------|----|
| AI3003   | Neural Networks and Deep Learning | FE |
| AI3133   | Natural Language Processing       | FE |
| STAT3033 | Bayesian Statistics               | FE |
| STAT4073 | Data Mining                       | ME |

# Four-Year Study Plan of Intelligent Science and Technology plus Applied Mathematics Programme (2026 cohort)

Rev 20260723

Rev 202607/23

| Course Code                                      | Course Title                                                                                                                                                                                          | Year One        |        |       | Year Two        |       |        | Year Three |       | Year Four |                 |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|-------|-----------------|-------|--------|------------|-------|-----------|-----------------|
|                                                  |                                                                                                                                                                                                       | Sem 1           | Winter | Sem 2 | Sem 1           | Sem 2 | Summer | Sem 1      | Sem 2 | Sem 1     | Sem 2           |
| I. Major Required Courses (51 Units)             |                                                                                                                                                                                                       |                 |        |       |                 |       |        |            |       |           |                 |
| MATH1053                                         | Linear Algebra I                                                                                                                                                                                      | 3               |        |       |                 |       |        |            |       |           |                 |
| MATH1123 <sup>①*</sup>                           | Calculus for Science and Engineering                                                                                                                                                                  | 3               |        |       |                 |       |        |            |       |           |                 |
| AI2033 <sup>①*</sup>                             | Probability and Statistics                                                                                                                                                                            |                 |        | 3     |                 |       |        |            |       |           |                 |
| COMP1023                                         | Foundations of C Programming                                                                                                                                                                          |                 |        | 3     |                 |       |        |            |       |           |                 |
| MATH1063                                         | Linear Algebra II                                                                                                                                                                                     |                 |        | 3     |                 |       |        |            |       |           |                 |
| MATH1083                                         | Calculus II                                                                                                                                                                                           |                 |        | 3     |                 |       |        |            |       |           |                 |
| COMP2003                                         | Data Structures and Algorithms                                                                                                                                                                        |                 |        |       | 3               |       |        |            |       |           |                 |
| MATH2043                                         | Ordinary Differential Equations                                                                                                                                                                       |                 |        |       | 3               |       |        |            |       |           |                 |
| MATH2053                                         | Mathematical Analysis                                                                                                                                                                                 |                 |        |       | 3               |       |        |            |       |           |                 |
| MATH4083                                         | Numerical Analysis                                                                                                                                                                                    |                 |        |       |                 | 3     |        |            |       |           |                 |
| OR4023                                           | Optimization                                                                                                                                                                                          |                 |        |       |                 | 3     |        |            |       |           |                 |
| STAT3083                                         | Applied Statistics                                                                                                                                                                                    |                 |        |       |                 | 3     |        |            |       |           |                 |
| MATH4093                                         | Complex Analysis                                                                                                                                                                                      |                 |        |       |                 |       |        | 3          |       |           |                 |
| MATH4103                                         | Mathematical Modelling                                                                                                                                                                                |                 |        |       |                 |       |        | 3          |       |           |                 |
| MATH3033                                         | Partial Differential Equations                                                                                                                                                                        |                 |        |       |                 |       |        |            | 3     |           |                 |
| MATH3163                                         | Real Analysis                                                                                                                                                                                         |                 |        |       |                 |       |        |            | 3     |           |                 |
| MATH4123                                         | Final Year Project I (MATH)                                                                                                                                                                           |                 |        |       |                 |       |        |            |       | 3         |                 |
| II. Major Elective Courses (15 Units)            |                                                                                                                                                                                                       |                 |        |       |                 |       |        |            |       |           |                 |
| ME01 ME02 ME03 ME04 ME05                         |                                                                                                                                                                                                       |                 |        |       |                 | 3     |        | 3          | 3     | 3         | 3 <sup>①*</sup> |
| III. University Core Courses (37 Units)          |                                                                                                                                                                                                       |                 |        |       |                 |       |        |            |       |           |                 |
| UCLC1003                                         | University Chinese                                                                                                                                                                                    |                 |        | 3     |                 |       |        |            |       |           |                 |
| UCLC1013                                         | English for Academic Purposes I                                                                                                                                                                       | 3               |        |       |                 |       |        |            |       |           |                 |
| UCLC1023                                         | English for Academic Purposes II                                                                                                                                                                      |                 |        | 3     |                 |       |        |            |       |           |                 |
| UCAI1003                                         | Introduction to AI Literacy                                                                                                                                                                           | 3               |        |       |                 |       |        |            |       |           |                 |
| CHI1103                                          | Introduction to Modern Social Theories                                                                                                                                                                |                 |        |       | 3               |       |        |            |       |           |                 |
| CHI1203                                          | Morality and Foundations of Law                                                                                                                                                                       |                 |        | 3     |                 |       |        |            |       |           |                 |
| CHI1063                                          | Chinese Culture and Modern China                                                                                                                                                                      |                 |        |       |                 | 3     |        |            |       |           |                 |
| CHI1073                                          | Contemporary Chinese Society and Thought I                                                                                                                                                            | 3               |        |       |                 |       |        |            |       |           |                 |
| CHI1253                                          | Contemporary Chinese Society and Thought II                                                                                                                                                           |                 |        |       |                 | 3     |        |            |       |           |                 |
| CHI1193                                          | Contemporary World and China <sup>①</sup>                                                                                                                                                             |                 |        |       |                 |       | 2      |            |       |           |                 |
| MT1003                                           | Military Training                                                                                                                                                                                     |                 | 2      |       |                 |       |        |            |       |           |                 |
| WPEX1013                                         | Emotional Intelligence                                                                                                                                                                                |                 |        | 1     |                 |       |        |            |       |           |                 |
| WPEX2013                                         | Experiential Arts <sup>②</sup>                                                                                                                                                                        |                 |        |       |                 | 1     |        |            |       |           |                 |
| WPEX2023/<br>WPEX2033                            | Voluntary Service <sup>②</sup> , or Environmental Awareness <sup>②</sup>                                                                                                                              |                 |        |       | 1               |       |        |            |       |           |                 |
| UCLH1XX3                                         | Healthy Lifestyle <sup>②</sup>                                                                                                                                                                        | 1               |        | 1     |                 | 1     |        |            |       |           |                 |
| IV. General Education Courses (18 Units)         |                                                                                                                                                                                                       |                 |        |       |                 |       |        |            |       |           |                 |
| Level 1                                          | History and Civilization <sup>②</sup>                                                                                                                                                                 |                 |        |       | 3               |       |        |            |       |           |                 |
| Foundational Courses                             | Quantitative Reasoning <sup>②</sup>                                                                                                                                                                   | 3               |        |       |                 |       |        |            |       |           |                 |
|                                                  | Values and the Meaning of Life <sup>②</sup>                                                                                                                                                           |                 |        |       |                 | 3     |        |            |       |           |                 |
| Level 2<br>Interdisciplinary<br>Thematic Courses | Culture, Creativity and Innovation <sup>②</sup> , or Science,<br>Technology and Society <sup>②</sup> , or Sustainable Communities <sup>②</sup>                                                        |                 |        |       |                 |       |        | 3          | 3     |           |                 |
| Level 3<br>GE Capstone<br>Courses                | Service-Learning Course <sup>②</sup> , or Service Leadership<br>Education Course <sup>②</sup> , or Experiential Learning Course <sup>②</sup> ,<br>or Interdisciplinary Independent Study <sup>②</sup> |                 |        |       |                 |       |        |            |       |           | 3               |
| V. Free Elective Courses (27 Units)              |                                                                                                                                                                                                       |                 |        |       |                 |       |        |            |       |           |                 |
| FE01 FE02 FE03 FE04 FE05 FE06 FE07 FE08 FE09     |                                                                                                                                                                                                       | 3 <sup>①*</sup> |        |       | 3 <sup>①*</sup> |       |        | 9          | 6     | 6         |                 |
| Total Units: 148                                 |                                                                                                                                                                                                       | 22              | 2      | 23    | 19              | 23    | 2      | 21         | 18    | 12        | 6               |

① This 2-unit course requires student to attend at least 10 lectures within his/her first two years of study.

② This denotes a course category in which a list of courses may be developed for students' selection. Students are expected to refer to the Online Course Selection System for courses available under each category.

③ Students are required to take GFVM1033 Ethics in An Era of Artificial Intelligence and Robotics or GFVM1043 Ethics in Daily Life and Life Sciences under this category.

\* **Common Core Course (Required) - CCR**

④ Students are required to take MATH1123 Calculus for Science and Engineering under MR, equivalent to MATH1073 Calculus I.

⑤ Students are required to take AI2033 Probability and Statistics under MR, equivalent to STAT2063 Probability Theory.

⑥ Students are required to take MATH4163 Final Year Project II (MATH) under ME..

⑦ Students are required to take AI1003 Python Programming under FE.

⑧ Students are required to take AI2013 Introduction to Artificial Intelligence under FE.

# **Common Core Course (Elective) - CCE:**

The CCE courses listed below are strongly recommended for students of the Intelligent Science and Technology plus Applied Mathematics Programme.

|         |                                        |    |
|---------|----------------------------------------|----|
| AI2003  | Data Structures and Algorithm Analysis | FE |
| AI2023  | Artificial Intelligence Workshop       | FE |
| PSY2043 | Introduction to Psychology             | FE |

**ME Course List of AM (2026 cohort)**

Rev 20260723

| Course Code | Course Title                                      | Units |
|-------------|---------------------------------------------------|-------|
| BIOL2003    | General Biology                                   | 3     |
| DS4023      | Machine Learning                                  | 3     |
| FINM2073    | Introduction to Python for Mathematical Computing | 3     |
| FINM3013    | Introduction to Financial Derivatives             | 3     |
| FINM3113    | Financial Engineering Workshop                    | 3     |
| FINM3123    | Introduction to Econometrics                      | 3     |
| FINM3133    | Time Series for Finance and Macroeconomics        | 3     |
| FINM3143    | Financial Mathematics                             | 3     |
| FINM4053    | Numerical and Simulation Techniques in Finance    | 3     |
| FINM4063    | Stochastic Calculus for Finance                   | 3     |
| MATH3013    | Discrete Mathematics                              | 3     |
| MATH3143    | Differential Geometry                             | 3     |
| MATH3173    | Applied Stochastic Process                        | 3     |
| MATH4003    | Graph Theory                                      | 3     |
| MATH4033    | Computational Finance                             | 3     |
| MATH4113    | Selected Topics in Applied Analysis               | 3     |
| MATH4143    | Functional Analysis                               | 3     |
| MATH4153    | Numerical Methods for Differential Equations      | 3     |
| MATH4163#   | Final Year Project II (MATH)                      | 3     |
| OR3013      | Linear Programming and Integer Programming        | 3     |
| OR3023      | Simulation                                        | 3     |
| PHYS2003    | Principles of Physics                             | 3     |
| STAT4013    | Multivariate Analysis                             | 3     |
| STAT4073    | Data Mining                                       | 3     |

# Except for the Math / Intelligent Science and Technology plus Applied Mathematics Programme, students who continue with the final year project in the second semester of Year 4 should, with the approval of the Programme, register MATH4163 Final Year Project II (MATH) as a major elective in that semester.