# Learning Area: Mathematics

## CAL3 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply trigonometric methods in solving problems<br>**AS 91575 (3.3) internal will be sat in Week 5** | AS 91575 (3.3) | 4 | 5 weeks | **N A M E** | Num |
| 2 | Apply systems of simultaneous equations in solving problems<br>**AS 91587 (3.15) internal will be sat in Week 10** | AS 91587 (3.15) | 3 | 4 weeks | **N A M E** | Num |
| 3 | Apply the algebra of complex numbers in solving problems<br>**AS 91577 (3.5) practice test will be sat next Term** | AS 91577 (3.5) | 5 | 1 week | | Num |
| | **Term 2 (10 weeks)** | | | | | |
| | Apply the algebra of complex numbers in solving problems<br>**AS 91577 (3.5) practice test will be sat in Week 4** | AS 91577 (3.5) | 5 | 4 weeks | | Num |
| 4 | Apply differentiation methods in solving problems<br>**AS 91578 (3.6) practice test will be sat in Week 10** | AS 91578 (3.6) | 6 | 6 weeks | | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Apply integration methods in solving problems<br>**AS 91579 (3.7) will be assessed in the Examination** | AS 91579 (3.7) | 6 | 5 weeks | | Num |
| | **Preliminary Examination (weeks 8 and 9) covering 3 external Achievement Standards (3.5, 3.6, 3.7)** | | | | | |
| | **Feedback from Examination** | | | | | |
| | **Term 4 (3 weeks)** | | | | | |
| | **Revision for external Achievement Standards 91577, 91578 and 91579<br>Or additional Standards 91573 and 91574** | | | | | |

| | |
|---|---|
| **Total number of credits achieved internally (out of 7):** | |

# STA3 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply probability concepts in solving problems | 3.13 AS 91585 | 4 | 6 weeks | | Num |
| 2 | Investigate bivariate measurement data **AS 3.9 will be project based and due week 11** | 3.9 AS 91581 | 4 | 5 weeks | N A M E | **Lit/Num** |
| | **Term 2 (10 weeks)** | | | | | |
| 3 | Apply probability distributions in solving problems | 3.14 AS 91586 | 4 | 5 weeks | | Num |
| 4 | Investigate time series data **AS 3.8 will be project based and due week 10** | 3.8 AS 91580 | 4 | 5 weeks | N A M E | **Lit/Num** |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Use statistical methods to make a formal inference **AS 3.10 will be project based due week 5** | 3.10 AS 91582 | 4 | 5 weeks | N A M E | **Lit/Num** |
| | **Revision for both external Achievement Standards** | | | 2 weeks | | |
| | **Preliminary Examinations (weeks 8 & 9) covering 2 external Achievement Standards (3.13, 3.14)** | | | | | |
| | Feedback from the Preliminary Examination | | | 1 week | | |
| | **Term 4 (4 weeks)** | | | | | |
| | **Revision for both external Achievement Standards** | | | | | |

**Total number of credits achieved internally (out of 12):**

# MAT3 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Use critical path analysis in solving problems **AS 3.4 will be sat in Week 4** | 3.4 AS 91576 | 2 | 3 weeks | N A M E | Num |
| 2 | Investigate bivariate measurement data **AS 3.9 will be sat in Week 9** | 3.9 AS 91581 | 4 | 5 weeks | N A M E | **Lit/Num** |
| 3 | Apply systems of simultaneous equations in solving problems | 3.15 AS 91587 | 3 | 2 weeks | | Num |
| | **Term 2 (10 weeks)** | | | | | |
| | Apply systems of simultaneous equations AS 3.15 will be sat in Week 4 | 3.15 AS 91587 | | 3 weeks | N A M E | |
| 4 | Investigate time series data **AS 3.8 will be sat in Week 10** | 3.8 AS 91580 | 4 | 6 weeks | N A M E | **Lit/Num** |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Apply linear programming methods in solving problems **AS 3.2 will be sat in week 4** | 3.2 AS 91574 | 3 | 4 weeks | N A M E | Num |
| 6 | Apply probability distributions in solving problems | 3.14 AS 91586 | | 3 weeks | | Num |
| | **Prelim Examinations (weeks 8 & 9) covering 1 external Achievement Standards (3.14)** | | | | | |
| | Apply probability distributions in solving problems | | | 1 weeks | | |
| | **Term 4 (3 weeks)** | | | | | |
| | **Apply probability distributions in solving problems** | | | **4 weeks** | | |

**Total number of credits achieved internally (out of 20):**

# MATH3 - Level 3 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Use critical path analysis in solving problems **AS 3.4 will be sat in Week 6** | 3.4 AS 91576 | 2 | 5 weeks | N A M E | Num |
| 2 | Apply systems of simultaneous equations in solving problems **AS 3.15 will be sat in week 11** | 3.15 AS 91587 | 3 | 5 weeks | N A M E | Num |
| | **Term 2 (10 weeks)** | | | | | |
| 3 | Apply linear programming methods in solving problems **AS 3.2 will be sat in week 5** | 3.2 AS 91574 | 3 | 5 weeks | N A M E | Num |
| 4 | Apply trigonometric methods in solving problems **AS 3.3 internal will be sat in Week 10** | 3.3 AS 91575 | 4 | 5 weeks | N A M E | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Investigate bivariate measurement data **AS 3.9 will be sat in Week 7** | 3.9 AS 91581 | 4 | 7 weeks | N A M E | **Lit/Num** |
| | | | | | | |
| | **Term 4 (3 weeks)** | | | | | |
| | Further assessment opportunities | | | | | |

**Total number of credits achieved internally (out of 16):**

# MAT2A COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks )** | | | | | |
| 1 | Apply coodinate geometry methods<br>**AS 91256 will be assessed in Week 4** | AS 91254 (2.1) | 2 | 3 weeks | N A M E | Num |
| 2 | Apply graphical methods in solving problems<br>**AS 91257 will be assessed in Week 9** | AS 91257 (2.2) | 4 | 5 weeks | N A M E | Num |
| 3 | Apply systems of equations in solving problems | AS 91269 (2.14) | | 1 week | | Num |
| | **Term 2 (10 weeks)** | | | | | |
| | Apply systems of equations in solving problems<br>**AS 91269 will be assessed in Week 2** | AS 91269 (2.14) | 2 | 2 weeks | N A M E | Num |
| 4 | Apply algebraic methods in solving problems<br>**End of topic test AS 91261 will be given in Week 8** | AS 91261 (2.6) | 4 | 5 weeks | | Num |
| 5 | Apply calculus methods in solving problems<br>**Progress test will be given in week 10** | AS 91262 (2.7) | 5 | 2 weeks | | Num |
| | **Term 3 (10 weeks)** | | | | | |
| | Apply calculus methods in solving problems continued<br>**End of topic test AS 91262 will be given in Week 3** | AS 91262 (2.7) | | 3 weeks | | |
| 6 | Apply probability methods in solving problems<br>**End of topic test AS 91267 will be assessed in the exam** | AS 91267 (2.12) | 4 | 4 weeks | | **Lit/Num** |
| **Preliminary Examinations (weeks 8 and 9) covering 3 external Achievement Standards (2.6, 2.7, 2.12)** | | | | | | |
| 7 | Apply trigonometric relationships in solving problems<br>**AS91259 will be assessed in Week 10 (optional)** | AS 91259 (2.4) | 3 | 1 week | N A M E | Num |
| **feedback on the Preliminary Examination and optional standard taught and assessed** | | | | | | |
| | **Term 4 (3 weeks)** | | | | | |
| **Revision for all three external Achievement Standards (91261, 91262, 91267)** | | | | 3 weeks | | |
| | | | | | **Total number of internal credits achieved (out of 8 (11)):** | |

# MAT2B COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply coordinate geometry methods in solving problems<br>**AS 91256 will be assessed in week 4** | AS 91256 (2.1) | 2 | 4 weeks | N A M E | Num |
| 2 | Apply networks in solving problems<br>**AS 91260 will be assessed in week 7** | AS 91260 (2.5) | 2 | 3 weeks | N A M E | Num |
| 3 | Investigate a situation involving elements of chance using a simulation<br>**AS 91268 will be assessed in week 11** | AS 91268 (2.13) | | 3 weeks | N A M E | **Lit/Num** |
| | **Term 2 (10 weeks)** | | | | | |
| 4 | Use statistical methods to make an inference<br>**AS 91264 will be assessed in week 6** | AS 91264 (2.9) | 4 | 6 weeks | N A M E | **Lit/Num** |
| 5 | Apply trigonometric relationships in solving problems<br>**AS 91259 will be assessed in week 10** | AS 91259 (2.4) | 3 | 4 weeks | N A M E | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 6 | Apply sequences and series in solving problems<br>**AS 91258 will be assessed in week 4** | AS91258 (2.3) | 2 | 3 weeks | N A M E | Num |
| 7 | Apply probability methods in solving problems<br>**AS 91267 will be assessed in the preliminary examination** | AS 91267 (2.12) | 4 | 4 weeks | external | **Lit/Num** |
| | **Term 3 Preliminary Examinations (weeks 8 and 9) covering 1 external Achievement Standard (91267)** | | | | | |
| | **Term 4 (3 weeks)** | | | | | |
| | Apply probability methods in solving problems<br>revision | AS 91267 (2.12) | | 3 weeks | | |
| | **Revision for the external Achievement Standard** | | | | | |

**Total number of internal credits achieved (out of 13):**

# MAT2C COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply coordinate geometry methods in solving problems<br>**AS 91256 will be assessed in Week 6** | AS 91256 (2.1) | 2 | 6 weeks | N A M E | Num |
| 2 | Apply network methods in solving problems<br>**AS 91260 will be assessed in Week 11** | AS 91260 (2.5) | 2 | 4 weeks | N A M E | Num |
| | **Term 2 (10 weeks)** | | | | | |
| 3 | Investigate a situation involving elements of chance using a simulation<br>**AS 91268 will be assessed in week 5** | AS 91268 (2.13) | 2 | 5 weeks | N A M E | **Lit/Num** |
| 4 | Apply trigonometric relationships in solving problems<br>**AS 91259 will be assessed in Week 10** | AS 91259 (2.4) | 3 | 5 weeks | N A M E | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Apply sequences and series in solving problems<br>**AS 91258 will be assessed in Week 4** | AS 91258 (2.3) | 2 | 3 weeks | N A M E | Num |
| 6 | Apply probability methods in solving problems<br>**AS 91267 will be assessed in the Preliminary Exam** | AS 91267 (2.12) | 4 | 4 weeks | | **Lit/Num** |
| **Preliminary Examinations (weeks 8 and 9) covering AS 91267** | | | | | | |
| | **feedback from exams** | | | **1 week** | | |
| | **Term 4 (3 weeks)** | | | | | |
| | **Revision for the external Achievement Standard AS 91267** | | | 3 weeks | | |
| | | | | | Total number of **internal credits** achieved (out of 11): | |

# MATH2 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply Numeric reasoning in solving problems<br>**AS 91026 will be assessed in Term 1** | AS 91026 (1.1) | 4 | 11 weeks | N A M E | Num |
| | **Term 2 (10 weeks)** | | | | | |
| 2 | Investigate a situation involving elements of chance<br>**AS 91038 will be assessed in Term 2** | AS 91038 (1.13) v3 | 3 | 10 weeks | N A M E | **Lit/Num** |
| | **Term 3 (10 weeks)** | | | | | |
| 3 | Transformation Geometry<br>**AS 91034 will be assessed in Term 3** | AS 91034 (1.9) v3 | 2 | 10 weeks | N A M E | Num |
| | **Term 4 (3 weeks)** | | | | | |
| | Xcel catch up assessments | | | 3 weeks | | |
| | | | | | Total number of **internal credits** achieved (out of 15): | |

# MAT1A COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply numeric reasoning in solving problems<br>**AS 91026 will be assessed in Week 4** | AS 91026 (1.1) | 4 | 3 weeks | **N A M E** | Num |
| 2 | Investigate a given multivariate data set using the statistical enquiry cycle<br>**AS 91035 will be assessed in Week 8** | AS 91035 (1.10) | 4 | 4 weeks | **N A M E** | **Lit/Num** |
| 3 | Investigate relationships between tables equations and graphs | AS91028 (1.3) | 4 | 3 weeks | | Num |
| | **Term 2 (10 weeks)** | | | | | |
| | Investigate relationships between tables equations and graphs continued<br>**AS 91028 practice test will be Week 1** | AS91028 (1.3) | 4 | 1 week | | |
| 4 | Apply algebraic procedures in solving problems<br>**AS 91027 practice test will be in Week 6** | AS 91027 (1.2) | 4 | 5 weeks | | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Demonstrate understanding of chance and data<br>**AS 91037 practice test will be sat in Week 4** | AS 91037 (1.12) | | 4 weeks | | Num |
| | Revision for external Achievement Standards 91027, 91028 and 91037 | | | 3 weeks | | |
| | **Preliminary Examinations (weeks 8 and 9) covering 3 external Achievement Standards (1.3, 1.12)** | | | | | |
| | **and the MCAT exam (1.2) on ??<br>September** | | | | | |
| | **feedback from exams** | | | | | |
| | **Term 4 (3 weeks)** | | | | | |
| | Revision for external Achievement Standards 91028 and 91037 | | | 3 weeks | | |

**Total number of credits achieved (out of 8):**

# MAT1B COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply numeric reasoning in solving problems<br>**AS 91026 will be assessed in Week 5** | AS 91026 (1.1) | 4 | 5 weeks | **N A M E** | Num |
| 2 | Investigate a given multivariate data set using the statistical enquiry cycle<br>**AS 91035 will be assessed in Week 11** | AS 91035 (1.10) | 4 | 5 weeks | **N A M E** | **Lit/Num** |
| | **Term 2 (10 weeks)** | | | | | |
| 3 | Investigate bivariate numerical data using the statistical enquiry cycle<br>**AS 91036 will be assessed in Week 4** | AS 91036 (1.11) | 3 | 3 weeks | **N A M E** | **Lit/Num** |
| 4 | Apply linear algebra in solving problems<br>**AS 91029 will be assessed in week 10** | AS 91029 (1.4) | 3 | 6 weeks | **N A M E** | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Apply right angled triangles in solving measurement problems<br>**AS 91032 will be assessed in week 4** | AS 91032 (1.7) | 3 | 3 weeks | **N A M E** | Num |
| 6 | Demonstrate understanding of chance and data<br>**AS 91037 practice test in the Preliminary Examination** | AS 91037 (1.12) | 4 | 4 weeks | | Num |
| | **Preliminary Examination (week 8 and 9) covering the external standard (1.12)** | | | | | |
| | Feedback from the Preliminary Examination | | | 1 week | | |
| | **Term 4 (3 weeks)** | | | | | |
| | Revision for external Achievement Standard 91037 | | | 3 weeks | | |
| | | | | | **Total number of credits achieved (out of 17):** | |

# MAT1C COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply numeric reasoning in solving problems<br>**AS 91026 will be assessed in Week 5** | AS 91026 (1.1) | 4 | 5 weeks | **N A M E** | Num |
| 2 | Investigate a given multivariate data set using the statistical enquiry cycle<br>**AS 91035 will be assessed in Week 1 Term 2** | AS 91035 (1.10) | | 5 weeks | | **Lit/Num** |
| | **Term 2 (10 weeks)** | | | | | |
| | Investigate a given multivariate data set using the statistical enquiry cycle<br>**AS 91035 will be assessed in Week 1** | AS 91035 (1.10) | 4 | 1 week | **N A M E** | |
| 3 | Investigate bivariate numerical data using the statistical enquiry cycle<br>**AS 91036 will be assessed in Week 5** | AS 91036 (1.11) | 3 | 4 weeks | **N A M E** | **Lit/Num** |
| 4 | Investigate a situation involving elements of chance<br>**AS 91038 will be assessed Week 10** | AS91038 (1.13) | 3 | 5 weeks | **N A M E** | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 5 | Apply right angled triangles in solving measurement problems<br>**AS 91032 will be assessed in week 5** | AS 91032 (1.7) | 3 | 5 weeks | **N A M E** | Num |
| 6 | Apply transformation geometry in solving problems<br>**AS 91034 will be assessed in week 10** | As 31034 (1.9) | 2 | 4 weeks | N A M E | Num |
| | **Term 4 (4 weeks)** | | | | | |
| | Further assessment opportunity | | | 3 weeks | N A M E | |

**Total number of credits achieved (out of 19):**

# MATH1 COURSE OUTLINE 2023

| | Topic | Standard Code | Credits offered | Time | Result | Lit/Num |
|---|---|---|---|---|---|---|
| | **Term 1 (11 weeks)** | | | | | |
| 1 | Apply numeric reasoning in solving problems<br>**AS 91026 will be assessed in Week 8** | AS 91026 (1.1) | 4 | 8 weeks | **N A M E** | Num |
| 2 | Apply transformation geometry in solving problems<br>**AS 91034 will be assessed in Term 2** | AS 91034 (1.9) | | 2 weeks | | Num |
| | **Term 2 (10 weeks)** | | | | | |
| | Apply transformation geometry in solving problems<br>**AS 91034 will be assessed in Week 4** | AS 91034 (1.9) | 2 | 3 weeks | **N A M E** | |
| 3 | Investigate a situation involving elements of chance<br>**AS 91038 will be assessed Week 10** | AS91038 (1.13) | 3 | 6 weeks | **N A M E** | Num |
| | **Term 3 (10 weeks)** | | | | | |
| 4 | Investigate bivariate numerical data using the statistical enquiry cycle<br>**AS 91036 will be assessed in Week 7** | AS 91036 (1.11) | 3 | 7 weeks | **N A M E** | **Lit/Num** |
| 5 | Apply right angled triangles in solving measurement problems - optional<br>**AS 91032 will be assessed in Term 4** | AS 91032 (1.7) | | 2weeks | | Num |
| | **Term 4 (4 weeks)** | | | | | |
| | Apply right angled triangles in solving measurement problems - optional<br>**AS 91032 will be assessed in week 3** | AS 91032 (1.7) | 3 | 3 weeks | **N A M E** | |

**Total number of credits achieved (out of 12+):**