

Contents

| | |
|-----------------------|---|
| Program Notes | 2 |
| Study Plan | 3 |
| Elective Tables | 4 |
| Majors | 5 |

General Electives

- General Electives must include **Broadening Electives** to the value of **9 units** that are not from the following subject areas: COMP SCI, MATHS, PURE MTH, APP MATH, STATS. *ENG 1002* does not count towards the Broadening electives requirement.
- Electives may be any University of Adelaide Undergraduate course for which the student meets the pre-requisites. Please check the availability, restriction and incompatible section on the course planner for elective choices.
- How to choose an elective course in your area of interest? Please refer to the steps via the link: <https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment>

Majors

- View individual major requirements in the [Majors](#) section.
- A major to the value of 24 units may be taken in one of the following:
 - Applied Mathematics
 - Pure Mathematics
 - Statistics
- A double major to the value of 24 units may be taken in one of the following:
 - Applied Mathematics and Pure Mathematics
 - Applied Mathematics and Statistics
 - Pure Mathematics and Applied Mathematics
 - Pure Mathematics and Statistics
 - Statistics and Applied Mathematics
 - Statistics and Pure Mathematics
- MATHS 3020 Advanced Mathematical Perspectives III may be presented towards a double major in the discipline of the project.

Courses Not Permitted

The following courses cannot be presented as electives:

- ECON 1008 Data Analytics I
- ECON 1010 Introduction to Mathematical Economics (Advanced) I
- ECON 2503 Intermediate Mathematical Economics II
- ECON 2504 Intermediate Econometrics II

Links and Further Information

- [Course Planner](#) Information about University courses, including availability, class times, restrictions and prerequisites.
- [University Calendar](#) All academic program rules.
- **Contact Ask ECMS:** askecms@adelaide.edu.au • +61 8 8313 4148 • www.ecms.adelaide.edu.au

Faculty of Engineering, Computer and Mathematical Sciences
2021 Study Plan – Semester 2 Start
Bachelor of Mathematical Sciences (Advanced)
Study Plan

| Course | | Units | Status |
|---------------|--------------------------------------------------------------------|-------|--------|
| Year 1 | | | |
| S2 | ENG 1002 Programming (Matlab and C) | 3 | |
| S2 | MATHS 1011 Mathematics IA | 3 | |
| S2 | STATS 1005 Statistical Analysis and Modelling I | 3 | |
| S2 | # Level I/II/III General Elective | 3 | |
| S1 | MATHS 1012 Mathematics IB | 3 | |
| S1 | MATHS 1015 Advanced Mathematical Perspectives I | 3 | |
| S1 | # Level I/II/III General Elective | 3 | |
| S1 | # Level I/II/III General Elective | 3 | |
| Year 2 | | | |
| S2 | MATHS 2100 Real Analysis II | 3 | |
| S2 | MATHS 2203 Advanced Mathematical Perspectives II | 3 | |
| S2 | STATS 2107 Statistical Modelling and Inference II | 3 | |
| S2 | # Level I/II/III General Elective | 3 | |
| S1 | MATHS 2101 Multivariable & Complex Calculus II | 3 | |
| S1 | MATHS 2102 Differential Equations II | 3 | |
| S1 | MATHS 2103 Probability & Statistics II | 3 | |
| S1 | # Level I/II/III General Elective | 3 | |
| Year 3 | | | |
| S2 | MATHS 3020 Advanced Mathematical Perspectives III | 3 | |
| S2 | # Level III General Elective | 3 | |
| S2 | Level III Mathematical Sciences Elective | 3 | |
| S2 | Level III Mathematical Sciences Elective | 3 | |
| S1 | MATHS 3025 Professional Practice III | 3 | |
| S1 | Level III Mathematical Sciences Elective | 3 | |
| S1 | Level III Mathematical Sciences Elective | 3 | |
| S1 | Level III Mathematical Sciences Elective | 3 | |

| | | | |
|-----------------------|----------------------------|---------------------------------------|----------------------------------|
| Core Course | | Elective Course (see Elective Tables) | |
| CM = Completed | CR = Credit Awarded | EN = Currently Enrolled | ENROL = Add to Enrolments |

General Electives: Please refer to [Program Notes](#) page for information on general elective requirements.

Elective Ordering

- Please note that the ordering of electives is an example only, students are free to change the ordering of electives if required.

Links and Further Information

- [Course Planner](#) Information about University courses, including availability, class times, restrictions and prerequisites.
- [University Calendar](#) All academic program rules.
- Contact Ask ECMS:** askecms@adelaide.edu.au • +61 8 8313 4148 • www.ecms.adelaide.edu.au

Faculty of Engineering, Computer and Mathematical Sciences
2021 Study Plan – Semester 2 Start
Bachelor of Mathematical Sciences (Advanced)
Elective Tables

| Available | Course | Units | Status |
|---------------------------------------------|---------------------------------------------------------------------------------|-------|--------|
| Applied Mathematics Elective Table | | | |
| N/A | APP MTH 2105 Optimisation and Operations Research II | 3 | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| Mathematical Sciences Elective Table | | | |
| S2 | MATHS 2104 Numerical Methods II | 3 | |
| S2 | MATHS 3012 Financial Modelling: Tools & Techniques III | 3 | |
| S2 | MATHS 3026 Cryptography III | 3 | |
| Pure Mathematics Elective Table | | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 2106 Algebra II | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| Statistics Elective Table | | | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |

Applied Mathematics Major

| Available | Course | Units | Status |
|-----------|---------------------------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| | and Mathematical Sciences courses to the value of 12 units | | |

Pure Mathematics Major

| Available | Course | Units | Status |
|-----------|------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| | and Mathematical Sciences courses to the value of 12 units | | |

Statistics Major

| Available | Course | Units | Status |
|-----------|------------------------------------------------------------------|-------|--------|
| | All of the following courses must be completed: | | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| | and courses to the value of 6 units from the following: | | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |
| | and Mathematical Sciences courses to the value of 12 units | | |

Applied Mathematics and Pure Mathematics Double Major

| Available | Course | Units | Status |
|-----------|---------------------------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| | plus courses to the value of 9 units from the following: | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |

Applied Mathematics and Statistics Double Major

| Available | Course | Units | Status |
|-----------|---------------------------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| | plus all of the following courses must be completed: | | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| | and courses to the value of 3 units from the following: | | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |

Bachelor of Mathematical Sciences (Advanced)

Pure Mathematics and Applied Mathematics Double Major

| Available | Course | Units | Status |
|-----------|---------------------------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| | plus courses to the value of 9 units from the following: | | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |

Pure Mathematics and Statistics Double Major

| Available | Course | Units | Status |
|-----------|------------------------------------------------------------------|-------|--------|
| | Courses to the value of 12 units from the following: | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| | plus all of the following courses must be completed: | | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| | and courses to the value of 3 units from the following: | | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |

Statistics and Applied Mathematics Double Major

| Available | Course | Units | Status |
|-----------|---------------------------------------------------------------------------------|-------|--------|
| | All of the following courses must be completed: | | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| | and courses to the value of 6 units from the following: | | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |
| | plus courses to the value of 9 units from the following: | | |
| N/A | APP MTH 3022 Optimal Functions and Nanomechanics III | 3 | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S1 | APP MTH 3002 Fluid Mechanics III | 3 | |
| S1 | APP MTH 3014 Optimisation III | 3 | |
| S1 | APP MTH 3021 Modelling with Ordinary Differential Equations III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | APP MTH 3023 Partial Differential Equations and Waves III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |

Statistics and Pure Mathematics Double Major

| Available | Course | Units | Status |
|-----------|------------------------------------------------------------------|-------|--------|
| | All of the following courses must be completed: | | |
| S1 | STATS 3001 Statistical Modelling III | 3 | |
| S1 | STATS 3006 Mathematical Statistics III | 3 | |
| | and courses to the value of 6 units from the following: | | |
| N/A | APP MTH 3124 Decision Science III | 3 | |
| N/A | STATS 3005 Time Series III | 3 | |
| N/A | STATS 3008 Biostatistics III | 3 | |
| S1 | APP MTH 3001 Applied Probability III | 3 | |
| S2 | APP MTH 3016 Random Processes III | 3 | |
| S2 | STATS 3022 Data Science III | 3 | |
| S2 | STATS 3023 Computational Bayesian Statistics III | 3 | |
| | plus courses to the value of 9 units from the following: | | |
| N/A | PURE MTH 3003 Number Theory III | 3 | |
| N/A | PURE MTH 3009 Integration and Analysis III | 3 | |
| N/A | PURE MTH 3018 Coding & Cryptology III | 3 | |
| N/A | PURE MTH 3021 Logic & Computability | 3 | |
| N/A | PURE MTH 3022 Geometry of Surfaces III | 3 | |
| N/A | PURE MTH 3024 Finite Geometry III | 3 | |
| S1 | PURE MTH 3002 Topology and Analysis III | 3 | |
| S1 | PURE MTH 3007 Groups and Rings III | 3 | |
| S1 | PURE MTH 3019 Complex Analysis III | 3 | |
| S2 | PURE MTH 3023 Fields and Modules III | 3 | |
| | and Mathematical Sciences courses to the value of 3 units | | |