# Graduate Diploma of Mathematics Articulated Set

includes:

## Graduate Diploma of Mathematics Graduate Certificate in Mathematics

The Graduate Diploma of Mathematics provides a flexible and tailored program of study to meet the varied needs of graduates. It aims to increase students quantitative skills by taking students from a high school calculus level of mathematics to the higher level required in various professions; for example teaching, engineering, finance, insurance, epidemiology and meteorology. In particular, this course allows teachers to add mathematics as a second teaching area or to move from primary to secondary mathematics teaching.

The Graduate Certificate in Mathematics provides a flexible and tailored program of study to meet the varied needs of graduates. It aims to increase students quantitative skills by taking students from a high school calculus level of mathematics to the higher level required in various professions; for example engineering, finance, insurance, epidemiology and meteorology.

## The course includes the following awards:

Graduate Certificate in Mathematics GradCertMath

Graduate Diploma of Mathematics GradDipMath

## **Course Study Modes and Locations**

Graduate Certificate in Mathematics (2310MT)

Distance Education - Wagga Wagga

#### Graduate Diploma of Mathematics (2610MT)

Distance Education - Wagga Wagga

Availability is subject to change, please verify prior to enrolment.

## Normal course duration

#### **Graduate Diploma of Mathematics**

Full-time 1 years (2.0 sessions)

#### **Graduate Certificate in Mathematics**

Full-time 0.5 years (1.0 sessions)

Normal course duration is the effective period of time taken to complete a course when studied Full-time (Full-time Equivalent: FTE). Students are advised to consult the Enrolment Pattern for the actual length of study. Not all courses are offered in Full-time mode.

### Admission criteria

#### CSU Admission Policy

#### **Graduate Diploma of Mathematics**

For entry to the Graduate Diploma in Mathematics applicants are required to have completed an undergraduate degree or, a relevant, academically – oriented TAFE qualification or, a teaching qualification or have a minimum of one year of employment in a scientific or quantitative environment. Applicants must also have studied a high school mathematics subject (within the last 10 years) that includes calculus (such as 2 unit Mathematics in NSW or Mathematical Methods in Victoria), OR have completed a University level subject (such as MTH105) which is deemed by the Course Coordinator to be equivalent.

Students who attempt the subject EPT442 will need to undergo a police check.

#### **Graduate Certificate in Mathematics**

Applicants without a tertiary qualification may be admitted to the Graduate Certificate in Mathematics on the basis of professional attainment and/or work experience in a scientific or quantitative environment. Applicants must also have studied a high school mathematics subject (within the last 10 years) that includes calculus (such as 2 unit Mathematics in NSW or Mathematical Methods in Victoria), OR have completed a University level subject (such as MTH105) which is deemed by the course coordinator to be equivalent.

## Credit

#### CSU Credit Policy

#### **Graduate Diploma of Mathematics**

For those students who do not have Head Teacher Mathematics aspirations, and do not want to study more than the minimum number of subjects required by their state Teaching Association may apply for a maximum of two subject credits based on their initial teaching qualification. These will be awarded as unspecified elective credits. Alternatively, instead of one of these credits, a student can choose to complete EMM442.

Secondary teachers who have been teaching an 80% load in mathematics across years 7-12 for at least one year may apply for proficiency credit for EPT442, based on professional experience. This will be assessed by the subject coordinator for the subject in the Faculty of Education.

#### **Graduate Certificate in Mathematics**

No special arrangements apply.

#### Articulation

The Graduate Diploma and Graduate Certificate make up an articulated set of courses and credit is given in each higher level course for the subjects completed in the lower.

#### **Graduation requirements**

#### **Graduate Diploma of Mathematics**

To graduate students must satisfactorily complete 64 points.

#### **Graduate Certificate in Mathematics**

To graduate students must satisfactorily complete 32 points.

#### **Course Structure**

#### **Graduate Diploma of Mathematics**

This course consists of 64 points. Students are required to complete the two core subjects and six restricted electives. Students must complete a minimum of four subjects at level 3 or

higher.

## Core subjects

<u>MTH101</u>Computer Aided Mathematics 1 <u>MTH102</u>Computer Aided Mathematics 2

## **Restricted Electives**

These include mathematics, statistics and education subjects.

The following subjects are focussed on extending the students mathematical and statistical skills.

MTH203Numerical Methods MTH218Multivariable Calculus MTH220Ordinary Differential Equations MTH307Mathematical Modelling MTH309Operations Research MTH328Complex Analysis MTH418Topics in Calculus MTH419Linear Algebra STA308Experimental Design STA308Experimental Design STA347Multivariate Statistics STA401Postgraduate Scientific Statistics STA427Generalised Linear Models STA502Spatial Statistics

The following subjects are to be studied by the teaching focussed students only:

EMM441Curriculum Methods 1: Mathematics EMM442Curriculum Methods 2: Mathematics\* Professional Experience EPT442: Professional Experience 2

\*This could replace one of the unspecified elective credits for those eligible students.

<u>EMM441</u> and <u>EPT442</u> are compulsory restricted electives for those students studying the course to add mathematics as a second teaching area or to retrain from primary to secondary mathematics.

For those students who do not have Head Teacher Mathematics aspirations, and do not want to study more than the minimum number of subjects required by their state Teaching Association may apply for a maximum of two subject credits based on their initial teaching qualification. These will be awarded as unspecified elective credits.

Secondary teachers who have been teaching an 80% load in mathematics across years 7-12 for at least one year may apply for proficiency credit for <u>EPT442</u>, based on professional experience. This will be assessed by the subject coordinator for the subject in the Faculty of Education.

## **Graduate Certificate in Mathematics**

This course consists of 32 points. Students are required to complete the two core subjects and two restricted electives with at least one at level 3 or higher.

## **Core subjects**

<u>MTH101</u>Computer Aided Mathematics 1 <u>MTH102</u>Computer Aided Mathematics 2

## **Restricted Electives**

MTH203Numerical Methods MTH218Multivariable Calculus MTH220Ordinary Differential Equations MTH307Mathematical Modelling MTH309Operations Research MTH328Complex Analysis MTH418Topics in Calculus MTH419Linear Algebra STA401Postgraduate Scientific Statistics

## **Enrolment Pattern**

## **Graduate Certificate in Mathematics**

It is possible to complete the course in one year if a student starts in session 1 of the calendar year however there is no flexibility in the choice of restricted electives. For most students the course would take at least 18 months as students need to have successfully completed both the core first year mathematics subjects to be able to study most of the higher level mathematics subjects.

## Enrolment pattern for students who commence in session 1 of the calendar year

Session 1 <u>MTH101</u>Computer Aided Mathematics 1 [] Restricted Elective

## Session 2

<u>MTH102</u>Computer Aided Mathematics 2 [] Restricted Elective

Students may study a single subject each session however this would extend the completion time. Students could commence the course in sessions 2 or 3 however would be restricted in their choice of subjects and the enrolment pattern would vary depending on subject availability and subject prerequisite requirements.

## **Graduate Diploma of Mathematics**

For most students the course would take at least 2 years as students need to have successfully completed both the core first year mathematics subjects to be able to study most of the higher level mathematics subjects.

Those students studying the course to add mathematics as a second teaching area may be able to complete the course in 18 months if a student starts in session 1 of the calendar year and has approved credits based on their initial secondary teacher education course.

## Enrolment pattern for students who commence in session 1 of the calendar year

Session 1 <u>MTH101</u>Computer Aided Mathematics 1 [] Restricted Elective

Session 2 <u>MTH102</u>Computer Aided Mathematics 2 [] Restricted Elective

Session 3 [] Restricted Elective [] Restricted Elective

Session 4
[] Restricted Elective
[] Restricted Elective

<u>EMM441</u> and <u>EPT442</u> are compulsory restricted electives for those students studying the course to add mathematics as a second teaching area or to retrain from primary to secondary mathematics. Such students, who study two subjects a session and start in session 1, are advised to select <u>EMM441</u> as the restricted elective with <u>MTH101</u> in their first session and <u>MTH419</u> in their second session.

Students may study a single subject each session however this would extend the completion

time.

Students could commence the course in sessions 2 or 3 however would be restricted in their choice of subjects and the enrolment pattern would vary depending on subject availability and subject prerequisite requirements.

## Workplace learning

Please note that the following subjects may contain a Workplace Learning component.

EPT442 Professional Experience 2

## **Residential School**

Please note that the following subjects may have a residential school component.

STA427 Generalised Linear Models

Enrolled students can find further information about CSU residential schools via the <u>About</u> <u>Residential School</u> page.

## Contact

For further information about Charles Sturt University, or this course offering, please contact info.csu on 1800 334 733 (free call within Australia) or email inquiry@csu.edu.au

The information contained in the 2016 CSU Handbook was accurate at the date of publication: October 2015. The University reserves the right to vary the information at any time without notice.

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