



## Staff

Position	Name	Email	Room
Lecturer-in-charge	Associate Professor Daniel Chan	<a href="mailto:danielc@unsw.edu.au">danielc@unsw.edu.au</a>	RC-4104

Please refer to your Timetable on MyUNSW for your Lecture Tut, Lab enrolment days and times.

Timetable weblink:

MATH3701 Timetable weblink: <http://timetable.unsw.edu.au/2022/MATH3701.html>

MATH5700 Timetable weblink: <http://timetable.unsw.edu.au/2022/MATH5700.html>

## Administrative Contacts

Please visit the following links for more information: [\(un\)10.51 \(s\)\( \)TjEMCaf2.04 31 \(s\)\( \)TjEMCa48 ref2i:e w your Lecure w\(t\) 0 11.04 54 58](#)

This course is part of the core Higher Pure Mathematics sequence MATH3711/MATH3611/MATH3701 which is designed to be taken in that order. In particular, it is strongly recommended that students have taken MATH3611 beforehand so they can get the most of it.

**Exclusions:**

For MATH5700 PG – Excluded MATH3531 Topology and Differential Geometry and MATH3701 Higher Topology and Differential Geometry

**Course Aims**

We are aware some course exclusions on the Handbook may be different to the School website. We are in the process of updating this information. Meanwhile, students should be following the Handbook course information with the School website information as a supplement.

The principal aim of this course is to introduce students to the topology and differential geometry of curves and surfaces, and to study some of the many applications.

**Course Description**

Topology and differential geometry both deal with the study of shape: topology from a continuous and differential geometry from a differentiable viewpoint.

This course begins with an introduction to general topology. We then study curves in space and how they bend and twist, and the topology of curves. We then consider surfaces, studying the first and second fundamental forms introduced by Gauss, the various measures of curvature and what they mean for the external and internal appearance and properties of surfaces. We prove the Gauss-Bonnet theorem (Theorem 5.9) and the Gauss-Mainardi-Codazzi equations (Theorem 5.10).

Note that the penalty does not apply to



## **Additional Support**

### **ELISE (Enabling Library and Information Skills for Everyone)**

ELISE is designed to introduce new students to studying at UNSW.

Additionally, if you have suffered significant misadventure that affects your ability to complete the course, please contact your Lecturer-in-charge in the first instance.

## **Academic Skills Support and the Learning Centre**

The Learning Centre offers academic support programs to all students at UNSW Australia. We assist students to develop approaches to learning that will enable them to succeed in their academic study. For further information on these programs please go to:

<http://www.lc.unsw.edu.au/services-programs>

## **Applications for Special Consideration for Missed Assessment**

Please adhere to the Special Consideration Policy and Procedures provided on the web page below when applying for special consideration.

<https://student.unsw.edu.au/special-consideration>

Please note that the application is not considered by the Course Authority, it is considered by a centralised team of staff at the Nucleus Student Hub.

The School will contact you (via student email account) after special consideration has been granted to reschedule your missed assessment, for a *lab test or paper-based test* only.

For applications for special consideration for *assignment extensions*, please note that the new submission date and/or outcome will be communicated through the special consideration web site only, no communication will be received from the School.

For Dates on Final Term Exams and Supplementary Exams please check the “Key Dates for Exams” ahead of time to avoid booking holidays or work obligations.

<https://student.unsw.edu.au/exam-dates>

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