

Course Description

Department of Mathematics

Nature of the course ☐ required ☒ elective		Area General Algebra ☐ Analysis ☐ Geometry ☐ Statistics ☐ Applied Mathematics ☐ Discrete Mathematics ☐ Others			
Calculus ☐ Calculus A ☐ Calculus B					
Course number		Section number		Number of credits	3
Course title	Basic Mathematics (基礎數學)				
Instructor	康明昌				
Contents : Set theory, point-set topology, solving some differential equations and difference equations I. Course prerequisite : Calculus A or B (two semesters) and linear algebra (one semester). II. Reference material (textbook(s)) : Thomas A. Garrity, All the mathematics you missed Graham, Knuth and Patashnik, Concrete mathematics Martin Aigner and G. M. Ziegler, Proof from the book, 2nd edition The course will be given by the instructor's lecture notes, while the outline of the contents will follow those in Garrity's book. Some examples will be given from the books of Graham,etc. and Aigner,etc. It is not necessary that the student has a copy of anyone of these books. III. Time : Tuesday 6,7,8 (14:20 – 17:00) IV. Grading scheme : Attendance and the final examination V. Course goal : This is a course designed for graduate students and advanced undergraduate students outside of Mathematics Department. We will introduce the mathematical tools and notions for those students who will use mathematics beyond calculus and linear algebra. Students in Mathematics Department are discouraged to take this course. If they insist taking this course, the permission of the instructor should be required.					