Calculus I

Registration Code	0064511	**Credits**	2.0
Course Category	Sciences Basic		
Term (Semester) / Day / Period	G-I (1st year, Fall Semester) / Thu. / 5（16:30～18:00）		
Instructor	RICHARD Serge Charles		
Target Schools (Programs)	Hu(J)･La(S)･Ec(S)･Sc(P･C･B)･En(P･C･Au)･Ag(B)		

●Objectives of the course

Analysis is the field of mathematics that describes and analyzes quantitative changes, and the central methods are differential and integral calculus. These methods are essential techniques in natural science, and have recently found increasing applications also in social sciences. The aim of the first half of this one-year course is to provide a solid understanding of functions of a single variable.

●Course Prerequisites

Some basic knowledge on calculus from high school is assumed, including differentiation and integration of polynomial functions.

●Course contents (will not appear on the syllabus booklet but on our website)

1. Limits and continuity
   Basic properties of limits of sequences and functions, continuous functions and their basic properties, maxima and minima, asymptotic properties of functions.
2. Differentiation
   Basic properties of the derivative and its interpretation, mean value theorem, higher derivatives, Taylor series.
3. Integration
   Riemann integral and its properties, improper integrals, the fundamental theorem of calculus.

●Evaluation methods

The final grade will be determined by quizzes (30%), the midterm (30%) and a final exam (40%).

●Notice for students

This course uses the course withdrawal system. To withdraw from the course and obtain the grade Absent the student must submit a written Course Withdrawal Request before the end of November. After that time any student who participated in any part of the examination will be graded S, A, B, C or F.

●Additional information

See

http://www.math.nagoya-u.ac.jp/~richard/fall2019.html

Textbook	None
Reference book	None