Calculus II

Registration Code	0055221	**Credits**	2.0
Course Category	Sciences Basic		
Term (Semester) / Day / Period	G-II (1st year, Spring Semester) / Fri. / 2 (10:30～12:00)		
Instructor	RICHARD Serge Charles		
Target Schools (Programs)	Hu(J)・La(S)・Ec(S)・Sc(P・C・B)・En(P・C・Au)・Ag(B)		

● Goals and 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 second half of this one-year course is to provide a solid understanding of functions of several real variables. The students will become familiar with the various tools necessary for the analysis of such functions.

● Course Prerequisites

Some notions on functions of one variable, as seen in Calculus I. A basic knowledge of linear algebra will be an asset.

● Course Content/Plan

The basic notions related to the study of functions of several variables, as for example: partial derivatives, maximum and minimum, implicit functions theorem, multiple integrals, change of variables, Jacobian matrix, surface and line integrals. Some elements of vector calculus will also be introduced.

● Evaluation Methods and Criteria

The final grade will be determined by quizzes (30%), the midterm (30%) and a final exam (40%). The grading scale will be **S**: 90-100, **A**: 80-89, **B**: 70-79, **C**: 60-69, **F**: 0-59. It is necessary to submit a Course Withdrawal Request Form when the student has no intention of finishing the course during the semester.

● Notice for Students

It is strongly encouraged to attend the Mathematics Tutorial 2a which is linked to this course.

Textbook	Free reference books and lecture notes are available on the website of the course
Reference Book	Free reference books and lecture notes are available on the website of the course
Reference website	http://www.math.nagoya-u.ac.jp/~richard/spring2020.html
Message	