Course nui	nber	U-LAS10 10023 LE55											
	Quest for Mathematics I-E2 Quest for Mathematics I-E2					name and d	Instructor's name, job title, and department of affiliation			Graduate School of Informatics Program-Specific Senior Lecturer,Li, Douglas			
Group Na	Group Natural Sciences					Field(Classification)			Mathematics(Foundations)				
Language of instruction English				Old	Old group Group			Number of credits 2			2		
Number of weekly time blocks			I CIASS SIVIC		ecture Face-to-	cture ace-to-face course)			Year/semesters		2024 • First semester		
Days and periods Thu.						Mainly 1st &	inly 1st & 2nd year student		Eligible students		For liberal arts students		

### [Overview and purpose of the course]

This class is an introduction to calculus for those who did not study "Mathematics III (of the Japanese high school standard)".

## [Course objectives]

The goal of the class is to solve problems of the same level with those in the entrance examination for science students. An additional goal of this course is to give a chance to the students to present and discuss mathematics in English.

# [Course schedule and contents)]

The course will cover the following topics, and each of them is read during 3-4 weeks:

- 1. Limit of series and continuous functions
- 2. Differentiation of elementary functions (for example: sine, cosine, exponential etc.)
- 3. Brief introduction of the Riemann integral and differential equations
- 4. Applications.

Total: 14 classes, 1 Feedback session

## [Course requirements]

None

### [Evaluation methods and policy]

The evaluation of the course will take into account the following criteria:

- -homework (40%)
- -presentation (20%)
- -final report (40%)

### [Textbooks]

Peter D. Lax Calculus With Applications (Springer)

Continue to Quest for Mathematics I-E2(2)

Quest for Mathematics I-E2(2)
[References, etc.]
- (References, etc.) 加古孝 『自然科学の基礎としての微積分』(朝倉書店)
[Study outside of class (preparation and review)]
Exercises are given in class and students are required to solve them for clear understanding of the topics in class.
[Other information (office hours, etc.)]
High school text book "Mathematics III (高等学校 数学 III)" based on the Japanese high school standard is useful to understand of the subject of the class.
Office hours are not assigned and it is advisable to make comments willingly during and after the class.