Calculus 2

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1. Course Description

First, the calculation method of the calculus for function of one variable is reviewed. Next, students will learn partial differentiation, maximum and minimum of function, double integral, double integral by polar coordinates, and application. Finally, they will learn the calculation method of differential equation. In this class, students will acquire knowledge and technology, and ability for diploma policy 2 and 3.

2. Course Objectives

Calculus is a field of the mathematics used as the foundation when studying natural science and engineering. This course aims to master the basic knowledge for calculus of more than two variables, practical skills to solve problems in these studies are trained.

3. Grading Policy

・Term-end examination : 65%
・Short examination : 20%
・Print and the problem to have let out while lecturing : 15%
Students will not be evaluated when they are not attending lectures more than 2/3. Small test will be returned after grading and will be explained during lecture. Answers will be upload to LMS.

4. Textbook and Reference

Textbook
Yoshihiro Tashiro　The mathematics of the engineering department Calculus　Morikita Publishing Co., Ltd. ISBN978-4-627-04932-1

5. Requirements(Assignments)

Review the calculus beforehand.
Make preparation which takes the following course by solving the exercises - the exercises in the textbook and so on. It carries the photograph of the writing of each time on the blackboard on LMS until lecture in the next time, confirm and review contents beforehand.
Also, do preparation - the review of the lecture schedule range each time for about 3 hours.

6. Note

If you're absent from lecture, please study and revise the topics taught on that day.

7. Schedule

[1]　　　　　Differential calculus of one variable function (review)
[2]　　　　　Two variable function
[3]　　　　　Partial differential
[4]　　　　　Mean value theorem of two variable functions
[5]　　　　　Maximum and minimum of two variable function
[6]　　　　　Implicit function theorem
[7]　　　　　Non-routine multiplier method
[8]　　　　　Short examination, Integral of one variable function (review)
[9]　　　　　Commentary of the short examination and summary of the first half
[10]　　　　Double integral (domain of integration)
[11]　　　　Double integral (change the order of integral calculus)
[12]　　　　Double integral by polar coordinates
[13]　　　　Differential equation of first order (variable separation form)
[14]　　　　Differential equation of second order for constant coefficients
[15]　　　　Term-end examination and summary