

# Physics 1

Syllabus Number 3F131  
Basic Major Subjects  
Requisites 2 credit  
TANAMOTO Tetsufumi

## 1. Course Description

Students will learn the fundamentals of mechanics. By showing many examples, students will be able to calculate the motions of objects. In this class, students will acquire knowledge about DP3.

## 2. Course Objectives

Students can understand the foundation of physical mechanics. Students will be able to numerically describe the motion of the object.

## 3. Grading Policy

Evaluation will be based on small tests and reports (50%) and results of final exams (50%).

## 4. Textbook and Reference

Textbook

Basic Physics Education Study Group 『やさしく学べる基礎物理』 Morikita Publishing

## 5. Requirements(Assignments)

Please always prepare and review for the class by using textbook (about 1.0 hour each).  
The contents of the class are in accordance with the chapters and contents of the textbook.

## 6. Note

Please bring a scientific calculator for exercises.

## 7. Schedule

- |      |                                  |
|------|----------------------------------|
| [1]  | What is speed?                   |
| [2]  | Description of speed             |
| [3]  | Equal acceleration linear motion |
| [4]  | Force                            |
| [5]  | Law of motion (1)                |
| [6]  | Law of motion (2)                |
| [7]  | Momentum and impulse (1)         |
| [8]  | Momentum and impulse (2)         |
| [9]  | Mechanical energy (1)            |
| [10] | Mechanical energy (2)            |
| [11] | Various exercises (1)            |
| [12] | Various exercises (2)            |
| [13] | Various exercises (3)            |
| [14] | Force acting on a rigid body     |
| [15] | Summary and test                 |