

# Physics 2

Syllabus Number 3F132  
Basic Major Subjects  
Requisites 2 credit  
TANAMOTO Tetsufumi

## 1. Course Description

Students study rotational motion and rigid body, wave motion, and light.

These fields are the foundation for understanding various physical phenomena occurring in the world.

This class corresponds to DP3, This class is also a required class, and relates to the mid term 4-2 of learning attainment targets for the JABEE program.

## 2. Course Objectives

Students can understand the fundamental of rotary motion and rigid body, wave motion, and light.

## 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 1.5 hour each).

The contents of the class are in accordance with the chapters and contents of the textbook.

## 6. Note

It is useful if you have a scientific calculator for exercises.

## 7. Schedule

- |      |                                       |
|------|---------------------------------------|
| [1]  | Forces acting on rigid bodies         |
| [2]  | Condition of rigid body balancing (1) |
| [3]  | Condition of rigid body balancing (2) |
| [4]  | A stationary fluid                    |
| [5]  | What is wave?                         |
| [6]  | Superposition of waves                |
| [7]  | Wave propagation                      |
| [8]  | Sound wave                            |
| [9]  | What is light?                        |
| [10] | Speed of light                        |
| [11] | Reflection and refraction of light    |
| [12] | Diffraction and interference of light |
| [13] | What is polarized light?              |
| [14] | Spectrum of light                     |
| [15] | Test, summary                         |