

# Laboratory Multimedia 1

in

# Fundamental

Syllabus Number

3D213

Basic Major Subjects

Elective Requisites 1  
credit

NAGATA TOMOHIRO

## 1. Course Description

The aim of this course is to help student acquire the knowledge of the image filters, the image processing and the foundation of sound processing, and the skill to program those functions. This course is related to diploma policy DP2 and DP4M.

## 2. Course Objectives

By the end of the course, students should be able to do the following:

- write digital image filtering programs.
- write digital image processing programs.
- write sound processing programs.

## 3. Grading Policy

Grading will be decided based on reports (100%).  
Feedbacks on reports and examinations will be given on LMS.

## 4. Textbook and Reference

Textbook

The Learning materials are published on the LMS.

## 5. Requirements(Assignments)

The students are expected to read lecture materials and fill blanks in "main point notes" as preparation. It takes approximately one hour to finish this work.

## 6. Note

Absence and non-submission of reports are not accepted.

## 7. Schedule

- [1] Geometric transformation by OpenCV
- [2] Image processing (image filter) by OpenCV
- [3] Video processing by OpenCV
- [4] Sound generation and waveform drawing
- [5] Tones
- [6] Acoustic spectra
- [7] Effects