Digital Signal Processing1

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1. Course Description

This course is about the theory of digital signal processing and its technique. Mainly, convolution is discussed for realizing IIR and FIR digital filters. By using a textbook, learner can study basic of digital signal processing.
This course relates to DP2 and DP4.

2. Course Objectives

Main objectives of this course are as follows:

1. To know convolution procedure and its importance.
2. To know theory of digital signal processing.
3. To know application of mathematics for signal processing.

The above means this course handle digital signal processing other than FFT (and FFT) technique.

3. Grading Policy

Two reports (total 50%). Reports are reviewed when they are returned.
Final exam (50%)

4. Textbook and Reference

Textbook
Kiya   Japanese textbook (ISBN: 978-4274216060) is used.
   Ohmsha, Ltd.

5. Requirements(Assignments)

For reporting, students will solve exercises in textbook. Students can access the solutions. However, you're required to understand them. However, the exercises are not difficult in this course if you are without solid mathematical bases. Therefore, students should re-check their mathematical ability.

6. Note

If you would think an exercises in textbook was difficult, you should solve an example exercises in text. And please try to find similarity between those.

7. Schedule

[1]	Textbook chapter 1
[2]	Textbook section 2.1 to 2.2
[3]	Textbook section 2.3 to 2.6
[4]	Textbook section 3.1 to 3.2
[5]	Textbook section 3.3 to 3.4
[6]	Textbook section 4.1 to 4.2
[7]	Textbook section 4.3
[8]	Textbook section 4.4
[9]	Textbook section 5.1 to 5.2
[10]	Textbook section 5.3
[11]	Textbook section 5.4
[12]	Textbook section 6.1 to 6.2
[13]	Textbook section 6.3
[14]	Textbook section 6.4
[15]	Summary. Revision reports.