Course title: Basic information brain science

Term: 2nd Half

Credit(s): 1

The main day: The main period

School/Program: School of Life Science

Department/Program: Dept. Physiological Sciences

Category: Dept. Physiological Sciences

Lecturers: Keiichi Kitajo, Shohei Tsuchimoto, and others

Instructor:

Full name:

* NAMBU ATSUSHI

Outline:

Bases of information brain science can be learned through 4 lectures and 6 practice classes.

Students shall work on their own PC to learn basic programming.

Goal:

- Can operate the PC using commands.
- Can handle vast amount of data by utilizing computer programming.
- Can think of how to utilize computer programming to the students' own studies by reviewing latest studies.

Grading system:

Grading system: 01:Four-grade evaluation (A,B,C,D)

Grading policy:

- Students must attend at least half of the lectures to get credit.
- Assignments given in class (100%)

Lecture Plan:

2022, October - December, Wednesdays, 10:00-11:30

Contents:

Oct.12 Lecture: General Introduction (Kitajo)
Oct.19 Practice: MATLAB Basic commands, calculation (Kitajo)
Oct.26 Practice: MATLAB Basics of writing scripts (for, if sentences) (Tsuchimoto)
Nov.2 Practice: MATLAB One dimensional Fourier transform 1, creating figures (2D) (Ohkazaki)
Nov.9 Practice: MATLAB One dimensional Fourier transform 2 (Yamamoto)
Nov.16 Practice: MATLAB Two dimensional Fourier transform (Uehara)
Nov.30 Practice: MATLAB Image signal processing (Koike)
Dec.7 Lecture: Introduction to deep learning (Chikazoe)
Dec.14 Lecture: High performance computing: HPC (Fukumaga)
Dec.21 Lecture: Biological image informatics (Kato)

Location:

NIPS Myodaiji IF Lecture room / Zoom online
Remote lecture

Language:

English

Textbooks and references:

None

Related URL:

http://sbsjp.nips.ac.jp/schedule/

Explanatory note on above URL:

Please keep be updated on the latest schedule from "Schedule of the classes" on the program website.

Others:

Pre-requisites: Only those who have registered and participated in "Basic physiological and anatomical brain science" are eligible for attending this class. However, students who have entered SOKENDAI in fall may register for the course.

Keyword:

Integrative brain science course