Syllabus

1. Course title, style, and credit
   Investigation of human brain function using electrophysiological methods
   1 credit

2. Appropriate grade level and Eligible Departments
   D1, 2 (obligatory), D3-5 (optional) School of Life Science

3. Main lecturer
   Ryusuke KAKIGI, M.D., Ph.D.
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   TEL: 0564-55-7751 FAX: 0564-52-7913
   5th Floor, NIPS (Myodaiji Area)

4. Time
   [Oral]
   10:00 ~ 12:00 on Friday
   October 2, 9, 30
   November 13, 20, 27
   December 4, 11,

5. Place
   1F Lecture room in Myodaiji building of NIPS

6. Prerequisites and Styles
   This course is given as oral lecture in English.

7. Contents
   Clinical neurophysiology is to study human brain functions using
   electrophysiological methods such as electroencephalography, magnetoencephalography,
   electromyography, and transcranial magnetic stimulation. One of the biggest advantages
   of this is a very high temporal resolution in order of msec. compared with hemodynamic
   methods such as functional magnetic resonance imaging and near-infrared spectroscopy.
   This lecture series will introduce basic knowledge of clinical neurophysiology and
   up-to-date findings of human brain functions using electrophysiological methods and
   hemodynamic methods, mainly the former.

8. Course objectives
   1. Comprehension of basic knowledge of clinical neurophysiology.
   2. Comprehension of up-to-date findings of human brain functions using
      electrophysiological methods
9. **Schedule**

(1) October 2nd  
Basic knowledge of clinical neurophysiology  
Ryusuke KAKIGI (NIPS)

(2) October 9th  
Pain-related brain activity  
Koji INUI (NIPS)

(3) October 30th  
Change-related brain activity  
Koji INUI (NIPS)

(4) November 13th  
Neural processing of auditory signals in human brain  
Hidehiko OKAKOTO (NIPS)

(5) November 20th  
Cortical plasticity in the human auditory cortex  
Hidehiko OKAMOTO (NIPS)

(6) November 27th  
Face perception in humans  
Ryusuke KAKIGI (NIPS)

(7) December 4th  
Attention and consciousness  
Tetsuo KIDA (NIPS)

(8) December 11th  
Structure and function of oral and maxillofacial region  
Kiwako SAKAMOTO (NIPS)

10. **Lecture materials and readings**  
Nothing in particular

11. **Grades**  
Students are requested to file the short essay related to the Course Objectives. Either passed or failed is determined by the quality of the report. Students must attend the classes at least half of total classes to take a credit.

12. **Notes**  
Nothing in particular