

<b>Course number</b>	G-LAS10 80009 LE63				
<b>Course title (and course title in English)</b>	認知神経科学特論 Topics in Cognitive Neuroscience		<b>Instructor's name, job title, and department of affiliation</b>	Graduate School of Advanced Integrated Studies in Human Survivability Professor,SEKIYAMA KAORU	
<b>Group</b>	Interdisciplinary Graduate Courses		<b>Field(Classification)</b>	Humanities and Social Sciences	
<b>Language of instruction</b>	English		<b>Old group</b>		<b>Number of credits</b> 2
<b>Number of weekly time blocks</b>	1	<b>Class style</b>	Lecture (Face-to-face course)		<b>Year/semesters</b> 2025・Second semester
<b>Days and periods</b>	Tue.1		<b>Target year</b>	Graduate students	<b>Eligible students</b> For liberal arts students

( Students of Graduate School of Advanced Integrated Studies in Human Survivability cannot take this course as liberal arts and general education course. Please register the course with your department. )

### [Overview and purpose of the course]

「 This course introduces objective/empirical methods for understanding human mind (or cognition), by using psychological behavioral data together with brain activity data in cognitive neuroscience. To do so, we will examine several phenomena such as recognition of one ' s own body, speech perception by face and voice, and working memory. In the examination, we will see connection between cognition and action (or body), and its plasticity as well as developmental and aging-related changes.

### [Course objectives]

-Understand the objective/empirical methods to investigate cognitive function  
-Understand the plastic and developmental aspects of mind, which is useful to deal with people in different ages and backgrounds

### [Course schedule and contents]

1. Adaptive mind: Seeing and brain function
  2. Experimenting body recognition (1)
  3. Experimenting body recognition (2)
  4. Body schema and its development
  5. Development of brain and cognition
  6. On experiments with reversing prisms
  7. Brain imaging of cognition
  8. Hearing sound and speech
  9. Auditory-visual (AV) speech perception
  10. Neural basis of interlanguage differences in AV speech perception
  11. Processes of memory
  12. Memory and brain
  13. Cognitive aging
  14. Lifestyles to protect our brain from aging
  15. Summary and final remarks
- (The contents is subject to change.)

Continue to 認知神経科学特論(2)

## 認知神経科学特論(2)

### **[Course requirements]**

Previous experience of basic psychological methods is desirable but not required.  
You will be asked to bring a laptop computer for an experiment.

### **[Evaluation methods and policy]**

Evaluated by class participation (20%), and midterm (40%) and final (40%) reports.

### **[Textbooks]**

Handout will be given.

### **[References, etc.]**

( **References, etc.** )  
Specified in the classroom.

### **[Study outside of class (preparation and review)]**

Expected to read introduced literature in advance and related literatures afterwards.

### **[Other information (office hours, etc.)]**

This is an introductory course to neuroscience and psychological science.

### **[Essential courses]**