Syllabus

1. Course Title, Style and Credit
   Remodeling of Neuronal Circuits
   Lecture
   1 Credit

2. Appropriate grade Level and Eligible Departments
   All Departments
   For Department of Physiological Sciences, D 1 & 2 (obligatory), D3-5 (optional)

3. Lectures
   Junichi Nabekura
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   5th Floor Myodaiji Area

4. Time
   [Oral]
   10:00-12:00 on Friday
   September 7th, 14th, 28th, October 5th, 26th, November 2nd, 9th, 30th, 2012.

5. Place
   Seminar room B of the Yamate 3rd Building, 9th Floor.
   The Lecture will be delivered by the remote lecture system.

6. Pre-requisites
   Basic knowledge on the central nervous system, especially synapse, will help to understand the lectures, but is not essential.

7. Contents
   We will introduce the basic mechanisms of the neuronal circuits and short-term and long-term plasticities.

8. Course objectives.
   1) To understand the excitatory and inhibitory synaptic transmissions, and their change in developments.
2) To understand the plasticity and remodeling of the neuronal circuits in recovery.

9. Schedule

(1) September 7th
   Overviews of Excitatory Circuits (Kato, G., NIPS)

(2) September 14th
   Overviews of Inhibitory Circuits (Ishibashi, H., NIPS)

(3) September 28th
   Signaling in synapses (Murakoshi, H., NIPS)

(4) October 5th
   Remodeling of Neuronal Circuits (Nabekura, J., NIPS)

(5) October 26th
   Synapse Elimination (Hashimoto, K., Hiroshima University)

(6) November 2nd
   Critical Period (Yoshimura, Y., NIPS)

(7) November 9th
   Transmitter Switching (Nabekura, J., NIPS)

(8) November 30th
   Light and vision processing in retina, and Optogenetics (Koizumi, A., NIPS)

10. Textbook
    Not Specified

11. Evaluation & Credit
    You have to attend >1/2 of 8 Lectures. Evaluation will be made based on the reports which will be presented after the end of all lectures. Subjects of the reports will be noticed later. Students achieving >60% of full marks will pass the examination.