RIKEN CBS Brain Science Training Program

Public Syllabus, 2023-24

Please note that this is a “public syllabus”. Upon admission to the class, students will receive a “closed syllabus” which includes more detailed information. And any information on here is subject to modification.

---

1. General Info

1.1 Program Basics

Program Chair:	Dr. Asuka Takeishi
Program Vice Chair:	Dr. Thomas J McHugh
Program Instructors:	CBS Team/Unit Leaders
Teaching Assistant:	Eichi Toyoizumi
Administrative Support:	CBS HD Team
Class Format & Time:	Onsite (+zoom) on Tuesday 17:00~19:00
Language of Instruction:	English

1.2 Timeline

Application Open:	Mid-July
Application Deadline:	2023 / 09 /10 at 23:59
Program Start Date:	2023 / 10 / 03
Journal Club 1:	2023 / 12 / 05
Oral Exam 1:	2024 / 02 / 06
Journal Club 2:	2024 / 03 / 19
Oral Exam 2:	2024 / 06 / 04
Graduation Ceremony:	2024 / 06 / 11

---

2. What is BSTP?

2.1 Program Description

The Brain Science Training Program is a 2 semester-long (October through June) lecture series that consists of 24 lectures each taught by different RIKEN CBS team/unit leaders, 2 journal club presentations, and 2 oral exams at the end of each semester. This program is suitable for those with a strong interest in becoming a neuroscientist. It is primarily designed for early-stage graduate students, but applications will be accepted from senior-graduate and undergraduate students as well. If you only wish to attend some lectures by RIKEN CBS PIs there’s an option to audit.

2.2 Mission & Learning Outcome

Neuroscience employs a wide range of disciplines from molecular biology to mathematics to ethology. Brain Science Training Program takes full advantage of the great diversity of CBS's research and provides a systematic overview of neuroscience. It is our sincere hope that through this program we will be able to play a part in fostering the next generation of neuroscientists.

By the end of the program, students:

1. Have a good grasp of the broad field of neuroscience
2. Can connect concepts and methods in different subfields of neuroscience
3. Are informed about scientific practices and a wide variety of training/career paths to become a neuroscientist
4. Are more confident in scientific communication in English
5. Have peers as well as mentors who share the same passion for neuroscience
6. Are ready to come back to RIKEN CBS (hopefully…!)

---

3. Format & Structure

3.1 Participation Option

- **Regular Course:** For those who intend to fully take part in BSTP (all components listed in Section 3.2). You will be graded and with a satisfactory grade, you will receive a certificate of completion at the end. You are expected to attend on-site, but we do have spots for a fully online regular course for those who are physically impossible to commute to RIKEN CBS every week (you will have the option in the application form). If you are trying to earn university credits for UTokyo or Waseda this is your option.
- **Audit Course:** For those who are interested in attending certain lectures but not in earning a certificate of completion. You will have access to the lectures but no other training. At this time you will be attending lectures on Zoom only, but you may be allowed to attend on-site depending on the number of students.

Option	Available Content	Participation	Certificate	Credits
Regular Course	Full Content	On-site (+ few zoom)	Yes	Yes (for some Uni)
Audit Course	Lectures only	On Zoom	No	No

3.2 Completion Requirement & Grading

For the completion of the program, you must attend at least 80% of the course lectures/journal clubs/exams. Participation in exams and Journal clubs are required. A grade of less than 40% would result in an incomplete. Grades are weighted as follows:

Attendance & Post-lecture reports:	30%
2 Journal Clubs:	15% x2 = 30%
2 Oral Exams:	15% x2 = 30%
Active Participation & Peer Evaluation:	10%
Total:	**100%**

For those of you taking BSTP as university credits, this will then be converted to a grade. 80% or more would be converted to the highest grade in the system, and 40% or less would be the lowest grade.

3.3 Lecture

Select RIKEN CBS team/unit leaders each give 2-hour lectures. In the first half, they give an overview of their field and in the second half, they dive into their research. More details are to be announced in the "Closed syllabus".

3.4 Journal Club

There will be 2 Journal clubs. Both of them will be in a "peer-review" practice format. Instructors pick a preprint and students prepare their own "peer reviews" and a presentation. More details are to be announced in the "Closed syllabus".

3.5 Exam

There will be two oral exams at the end of each semester. The exam will be given on Zoom. Students will be answering a question from a pre-announced set of questions. More details are to be announced in the "Closed syllabus".

---

4. Applying to BSTP

4.1 Eligibility

We expect a level of neuroscience-related knowledge of early graduate students or above. This program is suitable for those with a strong interest in becoming a neuroscientist. It is primarily designed for early-stage graduate students, but applications will be accepted from senior-graduate and undergraduate students as well.

4.2 Application Document

For applying to the "**Regular Course**" (see 3.1), please prepare the following set of documents in English:

- **CV in a specified format**
- **Letter of Motivation (~400 words)**

  → Explain why you want to participate in BSTP and your motivation behind it.

- **Comprehension Evaluation (~400 words + 400~800 words)**

  → **Q1.** Watch the following sample lecture of BSTP: https://www.youtube.com/watch?v=pitt11vYJhQ. Use your own words to summarize the content of the video in ~400 words.

  Q2. Choose a research paper from any subfield of neuroscience (animal, human, computational, molecular, etc.), and briefly describe the methods and findings. Explain how findings in the chosen paper supplement/contradict the materials presented in the sample lecture. Your response should be 400~800 words without the reference(s). *Do NOT choose a paper published from your current or previous lab.

- **Letter of Recommendation (from your supervisor)**

Set your file name as “Your name_Document title” (e.g. Eichi Toyoizumi_Letter of Motivation), and send them through this application form: https://riken-cbs.form.kintoneapp.com/public/bstp2023-regular **by the deadline: 2023 / 09 / 10 at 23:59**.

For applying to the “**Audit Course**”, you only need:

- **CV in a specified format**
- **Letter of Motivation (~400 words)**
  → Explain why you want to participate in BSTP and your motivation behind it.

Set your file name as “Your name_Document title” (e.g. Eichi Toyoizumi_Letter of Motivation), and send them through this application form: https://riken-cbs.form.kintoneapp.com/public/bstp2023-audit **by the deadline: 2023 / 09 / 10 at 23:59**.

*If you are affiliated with RIKEN CBS lab, or are part of the joint graduate program you are still eligible to apply and all the procedures are the same.
*For those of you trying to make BSTP count towards university credits, you are responsible for registering through your registration system at your university AFTER you are accepted to the BSTP. We cannot register on your behalf. (Currently, this applies to the University of Tokyo, Waseda University & MIP program at Kyoto University).

---

5. Learning & Support

5.1 Class Communication

More details are to be announced in the “Closed syllabus”.

5.2 Teaching Assistants & Tutors

Teaching assistants (TA) are either grad students or postdocs from RIKEN CBS. They are there to facilitate your learning and be a bridge between students and lecturers. Tutors are either alumni of the BSTP or members of PDFA who advise on presentations or exams or studying.

5.3 Textbook & Material

There is no official textbook. Lecture materials and suggested readings are posted in a specified folder.

5.4 Academic Integrity Policy

This course does not count towards your academic degree for everyone, but as a program ran by an academic research institution, we hold very high standards regarding academic integrity. Any work presented or submitted in this course must be the product of your original effort. When you incorporate the works, words, or ideas of another, you must provide a proper form of citation. Violation of the academic integrity policy may result in dismissal from the course.

6. Frequently Asked Questions

Q: How much is it?
A: It’s Free.

Q: Do you accept students from high school?
A: We will not be able to accept high school students due to space limitations and advanced materials/contents.

Q: Do you accept students from the industry?
A: We will consider applicants with adequate academic training (i.e. college degree) but due to space limitations priority is given to current university students.

Q: If I get rejected for the regular course, can I still participate as an audit student?
A: Yes, we will ask you if you would like to audit the course in the decision letter (email).