

SAMPLE SYLLABUS



Course Title

Introduction to Cognitive Neuroscience

Course Number

PSYCH-UA 9025 D01

Spring 2020

Syllabus last updated on: 6-JAN-2020

Lecturer Contact Information

Guido Hesselmann

Course Details

Wednesdays, 5:00pm–7:45pm, Academic Center (BLAC – Schönhauser Allee 36, 10435 Berlin). Rooms will be posted in Albert before your first class.

Prerequisites

PSYCH-UA 1 *Introduction to Psychology* or equivalent

Units earned

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Course Description

The aims of the course are to provide students with a broad understanding of the foundations of Cognitive Neuroscience, including dominant theories of the neural underpinnings of a variety of cognitive processes, and the research that has led to those theories. In doing so, students will also learn about the goals of Cognitive Neuroscience research, and the methods that are being employed to reach these goals.

Course Objective

At the end of the course, students will have knowledge about major Cognitive Neuroscience domains and current research in these areas.

Assessment Components

Best 2 of 3 In-Class Tests:	20% each (40% total)
Class Participation:	15%
Response Paper:	10%
Final Exam:	35%

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Failure to submit or fulfill any required component may result in failure of the class, regardless of grades achieved in other assignments.

In-Class Tests & Final Exam

There will be three in-class tests (45 minutes). Each test will be composed of multiple choice questions, short answers and identifications. Your lowest test score of the 3 will be dropped. There will be a final exam (90 minutes) that will be cumulative and similar in structure to the in-class tests.

Class Participation

Students are expected to prepare each meeting by reading the specified material (i.e., book chapter), to be present during all sessions of the course, to engage in and complete exercises and tests, and to actively contribute to discussions.

Response Paper

The response paper will identify an idea or argument that has surprised, perplexed or inspired you. It should be short, i.e., between half a page and one page long (A4, 2 cm margin on each side, double-spaced, Times New Roman, Font Size 12). Further details will be discussed in class. The paper must be submitted by midnight on the respective due date.

Required Text(s)

Electronic Resources (via NYU Classes/NYU Library)

Gazzaniga, M., Ivry, R. and G. Mangun. *Cognitive Neuroscience: The Biology of the Mind*, W.W. Norton (New York: 4th Edition 2014, or 5th Edition 2019) ISBN: 978-0-393-92228-8 (International Student Edition) OR 978-0393912036. (There is no need to purchase this book; your professor will provide you with a used loan copy. Please be aware that these books may contain markings from previous students. You may of course always purchase your own copy.)

One copy of each book is kept in the Reading Room of NYU Berlin's Academic Center, for you to read in the center but not to take out.

Please follow this link for the [NYU Berlin Library Catalogue](#) or the link on NYU Berlin's website (Academics/Facilities & Services).

Supplemental Text(s) (not required to purchase)

Kandel, E. et al. *Principles of Neural Science*. (McGraw-Hill Education Ltd, 2012); Ward, J. *The student's guide to cognitive neuroscience*. (Taylor & Francis Ltd., 2015); Postle, B.R. *Essentials of cognitive neuroscience*. (Wiley Blackwell, 2015); Passingham, Richard. *Cognitive Neuroscience: A Very Short Introduction* (Oxford University Press, 2016)

Note: Further course materials (e.g., book chapters, journal articles) will be posted on NYU Classes The reading of some supplemental texts will be required for successful class participation. Details will be announced in time.

Internet Research Guidelines

to be discussed in class

Additional Required Equipment

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n/a

Session 1 [05 Feb 2020]

Course formalities

Lecture: History and Principles of Neuroscience

Gazzaniga, Chapter 1

Session 2 [12 Feb 2020]

Lecture: Basic Functional Neuroanatomy

Gazzaniga, Chapter 2

Session 3 [19 Feb 2020]

Lecture: Methods of Cognitive Neuroscience

Gazzaniga, Chapter 3

Visiting Guest: Julian Keil, "How brain oscillations shape perception" (tbc)

Session 4 [26 Feb 2020]

Lecture: Perception

Gazzaniga, Chapter 5

Session 5 [04 Mar 2020]

Lecture: Recognition

Gazzaniga, Chapter 6

Lecture: Attention

Gazzaniga, Chapter 7

Session 6 [11 Mar 2020]

Excursion to Charité university hospital in Berlin-Mitte

Veith Weinhhammer, "Cognition in Psychiatric Disorders" (Lecture at Department of Psychiatry)

Michael Gaebler @ Virtual Reality Lab (Lecture at Berlin School of Mind and Brain)

Session 7 [18 Mar 2020]

Lecture: Motor Control

Gazzaniga, Chapter 8

Recap and Q&A for in-class test

In-Class Test #1 (about sessions 1, 2, 3)

25 MAR 2020 – SPRING BREAK – NO CLASS

Session 8 [01 Apr 2020]

Lecture: Working Memory
(506-519)

Gazzaniga, Chapter 12

Session 9 [8 Apr 2020]

Lecture: Hemispheric Asymmetry

Gazzaniga, Chapter 4

Recap and Q&A for in-class test

In-Class Test #2 (about sessions 4, 5, 7, 8)

Session 10 [15 Apr 2020]

Lecture: Language

Gazzaniga, Chapter 11

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Visiting Guest: Nils Kraus, "The predictive brain" (tbc)

Session 11 [22 Apr 2020]

Lecture: Learning & Memory

Gazzaniga, Chapter 9

Response paper due

Presentation and discussion of response papers

Session 12 [29 Apr 2020]

Lecture: Cognitive Control; Reward & Decision Making
(520-550)

Gazzaniga, Chapter 12

Visiting Guest: Marcus Rothkirch, "Attentional modulation of reward processing" (tbc)

Session 13 [06 May 2020]

Lecture: Emotion

Gazzaniga, Chapter 10

Recap and Q&A for in-class test

In-Class Test #3 (about sessions 9, 10, 11, 12)

Session 14 [13 May 2020]

Lecture: Consciousness
(607-622)

Gazzaniga, Chapter 14

Visiting Guest: Jaan Aru, "Artificial intelligence and the human mind" (tbc)

Recap and Q&A for final exam

Session 15 [20 May 2020]

Final Exam (about all sessions; list of most relevant slides will be provided)

Classroom Etiquette

To be discussed in class.

Suggested Co-Curricular Activities

Scientific lectures in the vibrant research community of Berlin, e.g., at the Bernstein Center for Computational Neuroscience (BCCN) or the Berlin School of Mind and Brain. Relevant lectures from the field of cognitive neuroscience will be announced.

[Museum of Medical History](#) on the campus of the Charité university hospital in Berlin Mitte. The lesser-known "[Tieranatomisches Theater](#)" on the same campus is definitely worth a visit too.

Your Lecturer

Guido Hesselmann is a professor of General and Biological Psychology at the Psychologische Hochschule Berlin (PHB). He is also affiliated with the Visual Perception Laboratory at the Charité hospital Berlin, Department of Psychiatry & Psychotherapy. One of his research interests is the neurocognition of conscious and unconscious perception. Before moving to Berlin, he worked as a postdoc at the Weizmann Institute of Science (Israel), and at the NeuroSpin research center (France).

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Academic Policies

Assessment Expectations

Grade A: The student makes excellent use of empirical and theoretical material and offers well-structured arguments in their work. The student writes comprehensive essays / answers to exam questions and their work shows strong evidence of critical thought and extensive reading.

Grade B: The candidate shows a good understanding of the problem and has demonstrated the ability to formulate and execute a coherent research strategy.

Grade C: The work is acceptable and shows a basic grasp of the research problem. However, the work fails to organize findings coherently and is in need of improvement.

Grade D: The work passes because some relevant points are made. However, there may be a problem of poor definition, lack of critical awareness, poor research.

Grade F: The work shows that the research problem is not understood; there is little or no critical awareness and the research is clearly negligible.

Grade Conversion

Your lecturer may use one of the following scales of numerical equivalents to letter grades:

A = 94-100 or 4.0
A- = 90-93 or 3.7
B+ = 87-89 or 3.3
B = 84-86 or 3.0
B- = 80-83 or 2.7
C+ = 77-79 or 2.3
C = 74-76 or 2.0
C- = 70-73 or 1.7
D+ = 67-69 or 1.3
D = 65-66 or 1.0
F = below 65 or 0

Attendance Policy

Participation in all classes is essential for your academic success, especially in courses that meet only once per week. Your attendance in both content and language courses is required and will be checked at each class meeting. As soon as it becomes clear that you cannot attend a class, you must inform your professor by e-mail immediately (i.e. before the start of your class). Absences are only excused if they are due to illness, Moses Center accommodations, religious observance or emergencies. Your professor or NYU Berlin's administration may ask you to present a doctor's note or an exceptional permission from NYU Berlin's Director or Wellness Counselor as proof. Emergencies or other exceptional circumstances must be presented to the Director. Doctor's notes need to be submitted to the Academics Office, who will inform your professors. Doctor's notes need to be from a local doctor and carry a signature and a stamp. If you want the reasons for your absence to be treated confidentially, please approach NYU Berlin's Director or Wellness Counselor.

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Unexcused absences affect students' grades: In content courses each unexcused absence (equaling one week's worth of classes) leads to a deduction of 2% of the overall grade and may negatively affect your class participation grade. In German Language classes two or three (consecutive or non-consecutive) unexcused absences (equaling one week's worth of classes) lead to a 2% deduction of the overall grade. Three unexcused absences in one content course and five unexcused absences in your German language course may lead to a Fail in that course. Being more than 15 minutes late counts as an unexcused absence. Furthermore, your professor is entitled to deduct points for frequent late arrival or late arrival back from in-class breaks. Please note that for classes involving a field trip, transportation difficulties are never grounds for an excused absence. It is the student's responsibility to arrive in time at the announced meeting point.

Exams, tests and quizzes, deadlines, and oral presentations that are missed due to illness always require a doctor's note as documentation. It is the student's responsibility to produce this doctor's note and submit it to the Academics Office; until this doctor's note is produced the missed assessment is graded with an F and no make-up assessment is scheduled. In content classes, an F in one assignment may lead to failure of the entire class.

Regardless of whether an absence is excused or not, it is the student's responsibility to catch up with the work that was missed.

Attendance Rules on Religious Holidays

Members of any religious group may, without penalty, excuse themselves from classes when required in compliance with their religious obligations. Students who anticipate being absent due to religious observance should notify their lecturer AND NYU Berlin's Academics Office in writing via e-mail one week in advance. If examinations or assignment deadlines are scheduled on the day the student will be absent, the Academics Office will schedule a make-up examination or extend the deadline for assignments. Please note that an absence is only excused for the holiday but not for any days of travel that may come before and/or after the holiday. See also [University Calendar Policy on Religious Holidays](#)

Late Submission of Work

- (1) Written work due in class must be submitted during the class time to the professor.
- (2) Late work should be submitted in person to the lecturer or to the Academics Office, who will write on the essay or other work the date and time of submission, in the presence of the student. Another member of the administrative staff may also personally accept the work and will write the date and time of submission on the work, as above.
- (3) Work submitted late receives a penalty of 2 points on the 100 point scale for each day it is late (excluding weekends and public or religious holidays), unless an extension has been approved (with a doctor's note or by approval of NYU Berlin's administration), in which case the 2 points per day deductions start counting from the day the extended deadline has passed.
- (4) Without an approved extension, written work submitted more than 5 days (excluding weekends and public or religious holidays) following the submission date receives an F.
- (5) End of semester essays must be submitted on time.

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- (6) Students who are late for a written exam have no automatic right to take extra time or to write the exam on another day.
- (7) Please remember that university computers do not keep your essays - you must save them elsewhere. Having lost parts of your essay on the university computer is no excuse for a late submission.

Provisions for Students with Disabilities

Academic accommodations are available for students with documented disabilities. Please contact the Moses Center for Students with Disabilities at 212-998-4980 or see their [website](#) for further information.

Plagiarism Policy

The presentation of another person's words, ideas, judgment, images or data as though they were your own, whether intentionally or unintentionally, constitutes an act of plagiarism. Proper referencing of your sources avoids plagiarism (see as one possible help the [NYU library guide](#) to referencing styles).

NYU Berlin takes plagiarism very seriously; penalties follow and may exceed those set out by your home school. Your lecturer may ask you to sign a declaration of authorship form.

Note that some assignments in the course may be checked for plagiarism by using TurnItIn or other another software designed to detect offences against academic integrity.

It is also an offense to submit work for assignments from two different courses that is substantially the same (be it oral presentations or written work). If there is an overlap of the subject of your assignment with one that you produced for another course (either in the current or any previous semester), you **MUST** inform your professor.

For a summary please follow the link to [NYU Global's academic policies](#).