

SAMPLE

NYU Prague

CORE-UA 9306

Life Science: Brain and Behavior

Spring 22

Course Format: Blended

Time Zone: CET

Spring 22

You may be taking courses at multiple locations this semester. If you are enrolled in this course 100% **remotely** please make sure that you have completed the online academic orientation via Brightspace so you are aware of site specific support structure, policies and procedures. **Please contact the site Academic Director (vanda.thorne@nyu.edu) if you need more assistance.**

If you are attending **in person**, you will be assigned a seat on the first day and are expected to use that seat for the entire semester due to NYU COVID-19 safety protocol. Please note that you are expected to attend every class meeting in-person; however, this may change at any point during the semester if local COVID-19 regulations require additional physical distancing.

Instructor Information

- Name: Eduard Kelemen

Course Information

- Course Number: CORE-UA 9306
- **Course Name: Brain and Behavior**
- **Meeting times: (CET)**

Lectures: Tuesdays 9:30 a.m. – 12:15 p.m. (CET) & Thursdays 9:30 a.m. – 10:45 a.m. (CET) (location for in person students: NYU campus in Prague: Malé nám. 143/2, 110 00 Prague)

Laboratory: Six Tuesdays 9:30 a.m. – 12:15 p.m. (CET) (February 1, February 22, March 1, April 5, May 3) location for in person students: National Institute of Mental Health, Topolová 748, 25067 Klecany, transportation will be arranged from NYU Prague campus)

- [NYU Prague Academic Calendar](#)

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Course Overview and Goals

The main goal of the course is to acquire a basic understanding of the brain processes that underlie cognitive abilities. The course will emphasize that the brain is a complex system of interacting units with emergent properties, rather than the more traditional approach that focuses on the activity and function of single nerve cells. The topics of the course cover key aspects of brain function such as: processing of sensory information, motor system function, constructing mental models of the world, that enable, for example, orientation in space, decision making, learning and memory, function of sleep, emotions, social behavior, brain development and brain pathologies.

An additional goal is to use neuroscience to illustrate and explain the scientific method and scientific work in general. When appropriate, the course will use historical examples and stories of specific scientists to inform about the process of scientific discoveries. The course will present scientific work as a continuous dialogue between theoretical ideas and experimental results, with controversies, conflicts and endless discussions.

This course will run in a blended format, some students will study in person at NYU Prague, while others will study online. The course will include practical laboratories adapted for in person as well as online students. For in person students the practical laboratories will take place at the premises of National Institute of Mental Health.

Upon Completion of this Course, students will be able to:

- Express a basic understanding of the brain processes that underlie cognitive abilities.
- Understand the process of scientific work – from stating a hypothesis, to experiments that test the hypothesis, to the interpretation of data.
- Understand how knowledge of brain science impacts society, healthcare, etc.

Course Requirements

Class Participation

You are expected to attend class during each scheduled session.

Homework

Students will receive several (typically three to five) questions at the end of each lecture and will be asked to prepare individually one-page answer to each question (with text and possibly illustrations). The answers should be submitted within two weeks. 50% of the final grade will be based on the homework.

Grading of Assignments

The grade for this class will be based on homework questions, two larger essays and one class presentation. The two essays should be five to ten pages long on a topic selected by each student that is related to brain and behavior course.

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Grading of Assignments

The grade for this course will be determined according to the following formula:

Assignments/Activities	% of Final Grade
Homework	50
Essay one	20
Essay two	20
Class presentation	10

Letter grades for the entire course will be assigned as follows:

Letter Grade	Percent
A	92.5% and higher
A-	90.0 – 92.49%
B+	87.5% - 89.99%
B	82.5% - 87.49%
B-	80% - 82.49%
C+	77.5% - 79.99%
C	72.5% - 77.49%
C-	70% - 72.49%
D+	67.5% - 69.99%
D	62.5% - 67.49
D-	60% - 62.49%
F	59.99% and lower

Assessment Expectations

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Grade A: Excellent work (i.e. thorough understanding and knowledge of material demonstrated in homework and essays, active participation and discussion of materials in lectures and laboratory classes)

Grade B: Very good work (very good knowledge of material, active participation in classes and laboratories)

Grade C: Good work: (good understanding and knowledge of material demonstrated in homework and essays)

Grade D: Satisfactory performance (satisfactory understanding and knowledge of material)

Grade F: unsatisfactory work

Course Schedule

Topics and Assignments

Week/Date	Topic	Reading	Assignment Due
Session 1 Tuesday, January 25	Introduction, Brain as a complex system	Chapter 1	Homework assigned at the end of each session is due two weeks later
Session 2 Thursday, January 27	Neurons and neuronal networks	Chapter 2 (part I)	Homework assigned at the end of each session is due two weeks later
Session 3 Tuesday, February 1	Lab 1. Nerve cell and nerve tissue – microscopy		Homework assigned at the end of each session is due two weeks later
Session 4 Thursday, February 3	Brain structure and function	Chapter 2 (parts II and III)	Homework assigned at the end of each session is due two weeks later
Session 5 Tuesday, February 8	Bioelectricity	Chapter 3 (part I)	Homework assigned at the end of each session is due two weeks later
Session 6 Thursday, February 10	Signal transmission within neurons - Action potential	Chapter 3 (part I)	Homework assigned at the end of each session is due two weeks later

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Session 7 Tuesday, February 15	Signal transmission between neurons – Synapse	Chapter 3 (part II)	Homework assigned at the end of each session is due two weeks later
Session 8 Thursday, February 17	Neurotransmitters and hormones	Chapter 4	Homework assigned at the end of each session is due two weeks later
Session 9 Tuesday, February 22	Lab 2. Brain anatomy – sheep brain dissection		Homework assigned at the end of each session is due two weeks later
Session 10, Thursday February 24	Review session		
Session 11, Tuesday, March 1	Lab 3. Recording action potential		Homework assigned at the end of each session is due two weeks later
Session 12 Thursday, March 3	Brain representing the world – vision	Chapter 7	Homework assigned at the end of each session is due two weeks later
Session 13 Tuesday, March 8	Sensory systems	Chapter 6	Homework assigned at the end of each session is due two weeks later
Session 14 Thursday, March 10	Attractor neural networks		Essay 1 due date
Tuesday, March 15	SPRING BREAK - NO CLASSES		
Thursday, March 17	SPRING BREAK - NO CLASSES		
Session 15 Tuesday, March 22	Model of space in the brain		Homework assigned at the end of each session is due two weeks later
Session 16 Thursday, March 24	Organization of brain activity in time		Homework assigned at the end of each session is due two weeks later
Session 17 Tuesday, March 29	Learning and memory 1	Chapter 13 (parts I and II)	Homework assigned at the end of each

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			session is due two weeks later
Session 18 Thursday, March 31	Learning and memory 2	Chapter 13 (parts I and II)	Homework assigned at the end of each session is due two weeks later
Session 19 Tuesday, April 5	Lab 4. Learning, memory, behavior		Homework assigned at the end of each session is due two weeks later
Session 20 Thursday, April 7	Review session		
Session 21 Tuesday, April 12	Sleep	Chapter 10	Homework assigned at the end of each session is due two weeks later
Session 22 Thursday, April 14	Emotions	Chapter 11	Homework assigned at the end of each session is due two weeks later
Session 23 Tuesday April 19	Social brain		Homework assigned at the end of each session is due two weeks later
Session 24 Thursday, April 21	Motor control	Chapter 5	Homework assigned at the end of each session is due two weeks later
Session 25 Tuesday, April 26	Brain development	Chapter 13 (part III)	Homework assigned at the end of each session is due two weeks later
Session 26 Thursday, April 28	Diseases of brain	Chapter 12	Homework assigned at the end of each session is due two weeks later
Session 27 Tuesday, May 3	Lab 5. Sleep lab and brain imaging		Essay 2 due date
Session 28 Thursday, May 5	Review session LAST DAY OF CLASSES		
Reading Day	NO CLASSES		

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Tuesday, May 10			
Session 29 Thursday, May 12	FINAL EXAMS		

Course Materials

Required Textbooks & Materials:

The Mind's Machine – Foundations of Brain and Behavior, Watson and Breedlove. Oxford University Press, Third Edition

Resources:

- **Access your course materials:** [Brightspace](#)
- **Databases, journal articles, and more:** [Bobst Library](#) (library.nyu.edu)
- **Assistance with strengthening your writing:** [NYU Writing Center](#) (nyu.mywconline.com)
- **Obtain 24/7 technology assistance:** [IT Help Desk](#) (nyu.edu/it/servicedesk)
- **NYU Prague library:** [Tritius Catalog](https://nyu.tritius.cz/?lang=EN) (https://nyu.tritius.cz/?lang=EN)

Course Policies

Attendance and Tardiness

Studying at Global Academic Centers is an academically intensive and immersive experience, in which students from a wide range of backgrounds exchange ideas in discussion-based seminars. Learning in such an environment depends on the active participation of all students. And since classes typically meet once or twice a week, even a single absence can cause a student to miss a significant portion of a course. To ensure the integrity of this academic experience, class attendance at the centers, or online through NYU Brightspaces if the course is remote synchronous/blended, is expected promptly when class begins. Attendance will be checked at each class meeting. If you have scheduled a remote course immediately preceding/following an in-person class, you may want to write to Academic Director Vanda Thorne (vt21@nyu.edu) to see if you can take your remote class at the Academic Center.

As soon as it becomes clear that you cannot attend a class, you must inform your professor and/or the Academic Director Vanda Thorne (vt21@nyu.edu) by email 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 site staff may ask you to present a doctor's note or an exceptional permission from an NYU Staff member as proof. Emergencies or other exceptional circumstances that you wish to be treated confidentially must be presented to staff. Doctor's notes must be submitted in person or by e-mail to the Academic Director, who will inform your professors.

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Unexcused absences may be penalized with a two percent deduction from the student's final course grade for every week's worth of classes missed, and may negatively affect your class participation grade. Four unexcused absences in one 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 frequently joining the class late.

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 site staff; 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.

Late Submission of Work

1. Work submitted late receives a penalty of 2 points on the 100 point scale for each day it is late (including weekends and public holidays), unless an extension has been approved (with a doctor's note or by approval of NYU SITE Staff), in which case the 2 points per day deductions start counting from the day the extended deadline has passed.
2. Without an approved extension, written work submitted more than 5 days (including weekends and public holidays) following the submission date receives an F.
3. Assignments due during finals week that are submitted more than 3 days late (including weekends and public holidays) without previously arranged extensions will not be accepted and will receive a zero. Any exceptions or extensions for work during finals week must be discussed with the Site Director.
4. Students who are late for a written exam have no automatic right to take extra time or to write the exam on another day.
5. 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.

Final Exams

Final exams must be taken at their designated times. Should there be a conflict between final exams, please bring it to the attention of the site Academic Director as soon as this is known to facilitate alternate arrangements. Final exams may not be taken early, and students should not plan to leave the site before the end of the finals period.

Academic Honesty/Plagiarism

According to the Liberal Studies Program Student Handbook, plagiarism is defined as follows:

Plagiarism is presenting someone else's work as though it were one's own. More specifically plagiarism is to present as one's own a sequence of words quoted without quotation marks from another writer, a paraphrased passage from another writer's work; facts or ideas gathered, organized and reported by someone else, orally and/or in writing. Since plagiarism is a matter of fact, not of the student's intention, it is crucial that acknowledgment of the sources be accurate and complete. Even where there is no

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conscious intention to deceive, the failure to make appropriate acknowledgment constitutes plagiarism.

The College of Arts and Science's Academic Handbook defines plagiarism similarly and also specifies the following:

“presenting an oral report drawn without attribution from other sources (oral or written), writing a paragraph which, despite being in different words, expresses someone else's idea without a reference to the source of the idea, or submitting essentially the same paper in two different courses (unless both teachers have given their permission in advance).

Receiving help on a take-home examination or quiz is also cheating – and so is giving that help – unless expressly permitted by the teacher (as in collaborative projects).

While all this looks like a lot to remember, all you need to do is give credit where it is due, take credit only for original ideas, and ask your teacher or advisor when in doubt.”

“Penalties for plagiarism range from failure for a paper, failure for the course or dismissal from the university.” (Liberal Studies Program Student Handbook)

Classroom Etiquette

- Please be mindful of your microphone and video display during synchronous class meetings. Ambient noise and some visual images may disrupt class time for you and your peers.
- If you are not using your cell phone to follow the lesson, cell phones should be turned off or in silent mode during class time.
- Make sure to let your classmates finish speaking before you do.
- Please do not eat during class and minimize any other distracting noises (e.g. rustling of papers and leaving the classroom before the break, unless absolutely necessary)
- If deemed necessary by the study away site (ie COVID related need), synchronous class sessions may be recorded and archived for other students to view. This will be announced at the beginning of class time.
- Students should be respectful and courteous at all times to all participants in class. In online classes, consider using the chat function or “raise hand” function in order to add your voice to class discussions.

Inclusivity Policies and Priorities

NYU's Office of Global Programs and NYU's global sites are committed to equity, diversity, and inclusion. In order to nurture a more inclusive global university, NYU affirms the value of sharing differing perspectives and encourages open dialogue through a variety of pedagogical approaches. Our goal is to make all students feel included and welcome in all aspects of academic life, including our syllabi, classrooms, and educational activities/spaces.

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 SITE's Academics Office in writing via email 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

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but not for any days of travel that may come before and/or after the holiday. See also [University Calendar Policy on Religious Holidays](#)

Pronouns and Name Pronunciation (Albert and Zoom)

Students, staff, and faculty have the opportunity to add their pronouns, as well as the pronunciation of their names, into Albert. Students can have this information displayed to faculty, advisors, and administrators in Albert, Brightspace, the NYU Home internal directory, as well as other NYU systems. Students can also opt out of having their pronouns viewed by their instructors, in case they feel more comfortable sharing their pronouns outside of the classroom. For more information on how to change this information for your Albert account, please see the [Pronouns and Name Pronunciation website](#).

Students, staff, and faculty are also encouraged, though not required, to list their pronouns, and update their names in the name display for Zoom. For more information on how to make this change, please see the [Personalizing Zoom Display Names website](#).

Moses Accommodations Statement

Academic accommodations are available for students with documented and registered disabilities. Please contact the Moses Center for Student Accessibility (+1 212-998-4980 or mosescsd@nyu.edu) for further information. Students who are requesting academic accommodations are advised to reach out to the Moses Center as early as possible in the semester for assistance. Accommodations for this course are managed through NYU Prague.

Bias Response

The New York University Bias Response Line provides a mechanism through which members of our community can share or report experiences and concerns of bias, discrimination, or harassing behavior that may occur within our community.

Experienced administrators in the Office of Equal Opportunity (OEO) receive and assess reports, and then help facilitate responses, which may include referral to another University school or unit, or investigation if warranted according to the University's existing Non-Discrimination and Anti-Harassment Policy.

The Bias Response Line is designed to enable the University to provide an open forum that helps to ensure that our community is equitable and inclusive.

To report an incident, you may do so in one of three ways:

- Online using the [Web Form \(link\)](#)
- Email: bias.response@nyu.edu
- Phone: 212-998-2277