McDaniel Europe, Campus in Budapest **2017**

PSY 2214: BEHAVIORAL NEUROSCIENCE
Pre-requisite : In order to register for this course, students must have completed PSY 1106: Introduction to Psychology.

Instructor: **Agnes Kittel**
Contact information: kittel.agnes@koki.mta.hu

Availability : MTA KOKI 803/c 1083 Budapest, Szigony u. 43.
Phone: (1) 210 9977

COURSE DESCRIPTION
Behavioral neuroscience is a subfield of neuroscience; it investigates the relationship between brain and behavior. A brief semester is not enough even to give a good overview of this huge topic; however, this time can be enough to raise the interest to this exciting and dynamically developing area of neuroscience and it can contribute to the understanding of the basic changes in the brain evoked by the different challenges. The aim of this course to make the students understood basic questions of neuroscience which can lead to new discoveries and can help us to reveal the possible reasons of neurodegenerative and mental diseases. Class will consist of lectures, students' oral presentations, class discussions and quizzes. One laboratory visit at IEM HAS is also included.

Required Texts:
Bear, M. F., Connors, B. TH., & Paradiso, M. A. (2016). Neuroscience: Exploring the Brain (4th ed.) Philadelphia: Lippincott Williams & Wilkins
Hand-outs or electronic resources will be available in due time.

Calculation of the final grade
In-class participation (max. 15 pts)
Quizzes, essays (max. 10 pts)
Presentations (max. 25 pts)
Mid-term exam (max. 10 pts)
Final exam (50 pts)

Standard McDaniel College scale:

100+	**A+**	93-100	A	90-92	A-
88-89	**B+**	83-87	B	80-82	B-
78-79	**C+**	73-78	C	70-72	C-
68-69	D+	63-67	D	60-62	D-
<60	F				

MCDANIEL COLLEGE HONOR CODE: The pledge should be signed on all your assignments. Any violation of the Honor Code will result in a zero for the given task and other possible sanctions.

CLASS POLICIES
Since the lectures are necessary to understand the curriculum, regular attendance of the classes is essential. You may be **absent only twice** without explanation/*no documentation is required*/ for the cause of your absence. ***Your grade drops one letter grade for each additional absence.***
In case of extended absence or extraordinary circumstances, illness or emergency or if you are struggling in this course and need my help, please contact me (*e-mail is preferred)* and you will get help as soon as possible.

Attendance & Participation:
All students will be active participants in class and prepared for class. Active in-class participation plays an important role in the final determination of the course grade. Even if you cannot attend class, you have to prepare your assignments and read assigned materials.
Electronic devices including cell phones must be turned off while you are in class. Please, do not be late, attend the class in time.

Assignments, presentations: Assignments have to be turned in by the beginning of class and oral presentations will be given on the due date. Submission of late work is not acceptable without consulting me in advance.
Quizzes: Several quizzes are planned during the semester. The short quiz questions will correspond to the main topics of previous classes.

Exams: Exams consist of short questions, multiple choice tests and essays. There will be no make-up exams!

COURSE OBJECTIVES

A brief summary of the history of neuroscience
Foundations: development of the nervous system, basic anatomy of the brain, introduction to neurobiology
Understanding the relationship between brain and behavior including the role of chemical control of the brain
Brain mechanisms in motivation and emotion, significance of stress and stress responses
Neurodegenerative diseases and their impacts on the society
Mental diseases – reasons and consequences

LEARNING OUTCOMES

Students will get an insight into the main challenges of neuroscience
Students will better understand the significance of new scientific achievements on the field, including some contemporary medical examinations
The gained knowledge about neurodegenerative and mental diseases will help the students' better understanding of people living in such conditions

DAY/DATE	TOPIC	READING
M 9/11	*Introductions;* Introduction to Neuroscience Ch One	*Bear et al. Neuroscience* Exploring the Brain pp. 4—21 highlights, video files
We 9/13	Neurons & Glia Ch Two	pp. 24-53 highlights, video files
M 9/18	Neuronal Membrane at Rest Ch Three	pp. 55-78 highlights, video files
We 9/20	Action Potential Ch Four	pp. 81-107 highlights, video files
M 9/25	Synaptic Transmission Ch Five	pp. 109-141 highlights, video files
We 9/27	Synaptic Transmission Ch Five	pp. 109-141 highlights, video files
M 10/2	Neurotransmitter Systems 1 Ch Six	pp. 143-177 highlights, video files
We 10/04	Gross Anatomy of CNS Ch Seven	pp. 179-190 highlights, video files
M 10/09	Development of CNS Ch Seven	pp. 192-219 highlights, video files
We 10/11	Wiring the Brain Ch 23	pp. 783-819 highlights, video files
M 10/16	**preparation for MTE, presentations**	
We 10/18	MIDTERM EXAM	
M 10/23	HNH	
We 10/25	**visit at the IEM HAS**	**visit at the IEM HAS**
M 10/30	Chemical Control of the Brain and Behavior Ch15	pp. 521-548 highlights, video files
We 11/01	All Saint's Day	
M 11/06	Brain and Behavior : STRESS Ch15	pp. 521-548 highlights, video files
We 11/08	Motivation Ch 16	pp. 551-577 highlights, video files
M 11/13	Motivation Ch 16	pp. 551-577 highlights, video files
We 11/15	Sex and the Brain Ch 17	pp. 579-612 highlights, video files
M 11/20	Emotion Ch 18	pp.615-641 highlights, video files
We 11/22	Emotion Ch 18	pp.615-641 highlights, video files
M 11/27	Language Ch 20	pp. 685-712 highlights, video files
We 11/29	Mental illness Ch 22	pp. 751-779 highlights, video files
M 12/04	Mental illness Ch 22	pp. 751-779 highlights, video files
We 12/06	Memory systems Ch 24	pp. 823-862 highlights, video files
M 12/11	**Q&A, important issues for the final exam**	
We 12/13	**FINAL EXAM**	
M 12/18	**FINAL GRADES are DUE**	