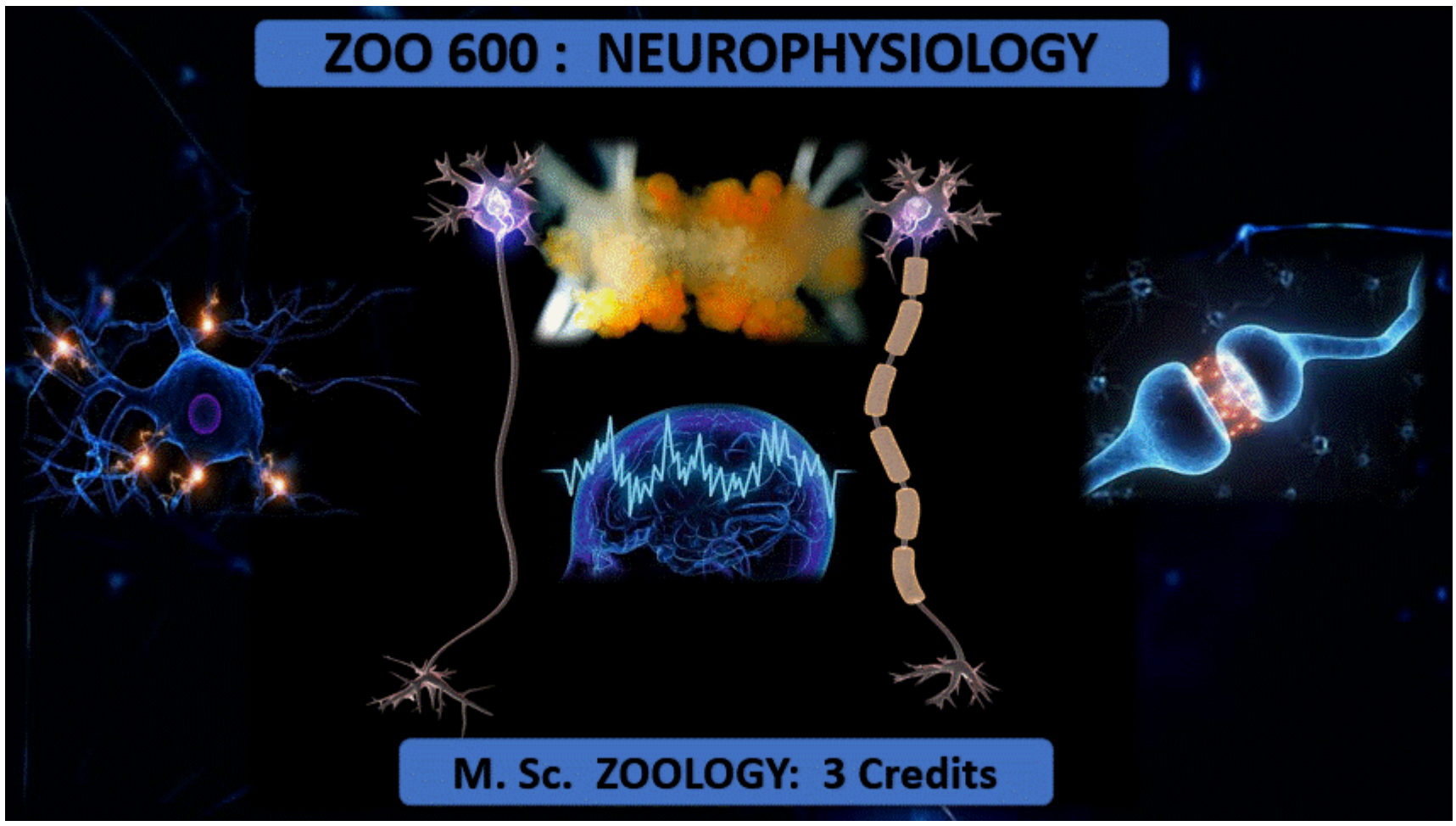
ZOO 600 : NEUROPHYSIOLOGY

Announcements

ZOO 600 Neurophysiology

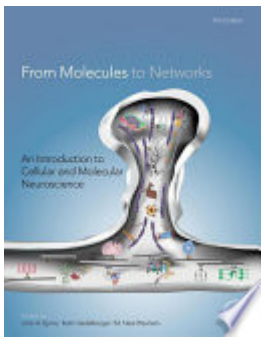


Course details

Course Schedule 2023-24

BOOKS

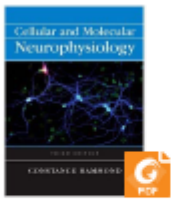
From Molecules to Networks: An Introduction to Cellular and Molecular ... edited by John H. Byrne, Ruth Heidelberger, M. Neal Waxham



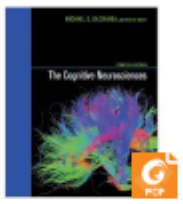
Neuroscience, 2nd edition Editors: Dale Purves, George J Augustine, David Fitzpatrick, Lawrence C Katz, Anthony-Samuel LaMantia, James O McNamara, and S Mark Williams.

Neuroscience books folder


Basic Neurochemistry. Principles of Molecular, Cell...

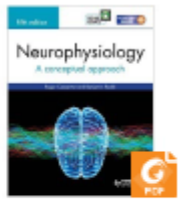


Cellular and Molecular Neurophysiology , Third Edition (...



Gazzaniga. The Cognitive Neurosciences


Molecular and Cellular Physiology of Neurons, Seco...



Neurophysiology _ a conceptual approach (PDFDrive)

Neurophysiology complete note from SlideShare for reference

Module 1

Review of classification of neurons and their functions. Blood-brain barrier and its physiological importance, CSF composition, formation, and drainage. Physiological characteristics of neuronal cell membrane components for impulse conduction. Myelin ultrastructure and Nodes of Ranvier, nerve impulse conduction in myelinated and unmyelinated neurons. Electrophysiology of neurons. Comparison of action potentials of the giant axon of Squid and mammalian neuron. Voltage and Cell-Patch Clamp Techniques.

Lecture 2

Review of classification of neurons and their functions.

Lecture 3 & 4

Blood brain barrier and its physiological importance, CSF composition, formation and drainage.

Lecture 5

Physiological characteristics of neuronal cell membrane components for impulse conduction.

Lecture 5

Electrophysiology of Neuron

Lecture 6 handout

Myelin ultrastructure and Nodes of Ranvier, Nerve impulse conduction in Myelinated and Unmyelinated neurons

Lecture 7

Electrophysiology of neuron. Comparison of action potentials of Giant axon of Squid and mammalian neuron

Lecture 8

Voltage and Cell-Patch Clamp Techniques

Lecture 2 video Part 1

Lecture 2 video Part 2

Lecture 2 video Part 3 continued with lecture 3 video part 1

Lecture 3 video part 2

Lecture 3 video part 3

Lecture 3 video part 4 continued with lecture 4 part 1

Lecture 4 video part 2

Lecture 6 video part 1

Blood Brain Barrier, Animation

Blood Brain Barrier, Animation (copy)

Module 2

Types of synaptic connections (axosomatic, axodendritic, dendro-dendritic, and axo-axonal synapses). Properties of Synapse. The basic concept of Neural integration: Diverging, Converging, and Reverberating circuits. Chemical and electrical synapses and their transmission physiology. Axonal impulse conduction-excitatory and inhibitory synaptic transmission. Neurotransmitters, Neuropeptides, and receptors. Steps involved in synthesizing, transporting, and releasing neurotransmitters and neuropeptides. Synthesis and release of Acetylcholine, Glutamate, GABA, Dopamine, Norepinephrine, and Epinephrine, Serotonin, Nitric oxide.

Lecture 16

Lecture 17

Lecture 18-19 & 20-21

Lecture 20

Class Activities feedback report

Presentation Topics

Video link for activity

Hidden from students

Part I & II Video shown in the class:

Reference videos:

Module 3

Learning and Memory types and its Neural and Cellular basis in Aplysia, Drosophila, Honey bee and Humans. Cognition and its major domains. Mechanoreception, Photoreception, Chemoreception. Neurophysiology of Balance and Posture.

- Module III lecture handout 31-32 + 35 part
- Module III Lecture handout 33-34
- Lecture 35-36 handout.pptx
- Lecture 37 handout

Life Processes Practical

Hidden from students

- Experiment 1 learning and memory pdf 1 on snail experiment
- Experiment 1 learning and memory pdf 1 on Crab

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First name All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Surname All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Select	First name / Surname	Email address	Roles	Groups	Last access to course	Status
☐	Anishka Khandeparkar	Zoo.201902602@unigoa.ac.in	Student	No groups	290 days 5 hours	Active
☐	Dialla Fernandes	Zoo.201908061@unigoa.ac.in	Student	No groups	306 days 5 hours	Active
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☐	Enida Fernandes	zoo.201601683@unigoa.ac.in	Student	No groups	301 days 21 hours	Active
☐	Mahi Sirsat	Zoo.201900904@unigoa.ac.in	Student	No groups	311 days 4 hours	Active
☐	Mayuri Verlekar	Zoo.20190361@unigoa.ac.in	Student	No groups	298 days 20 hours	Active
☐	Navita Gaude	Zoo.201905799@unigoa.ac.in	Student	No groups	306 days	Active
☐	Prarthana Naik	zoo.201811846@unigoa.ac.in	Student	No groups	300 days 5 hours	Active
☐	Riddhi Savoiverekar	Zoo.201902941@unigoa.ac.in	Student	No groups	300 days 10 hours	Active
☐	Shanti Dessai	shantidessai@unigoa.ac.in	Teacher, Course creator	No groups	1 sec	Active
☐	SONAL NAIK	Zoo.201905721@unigoa.ac.in	Student	No groups	300 days 17 hours	Active

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