**NEUR327**

**Cellular, Neurophysiological, and Pharmacological Neuroscience**

**Summer 2021-ONLINE**

**INSTRUCTOR:** N KABBANI
Contact Information: nkabbani@gmu.edu
Online meeting times: M/W/F 1:30-4PM

**OBJECTIVE**: This is a fundamental neuroscience course that presents basic concepts of cellular and molecular neuroscience. We will study key topics in neuronal function, including the structure of neurons, the functions of cell membranes, regulation of electrical properties , and intracellular signaling that participates in synaptic plasticity. Reading of the textbook (**Neuroscience 5/e, Purves et al. or any other edition**) is highly recommended.

**GRADING:** There will be 2 exams and a comprehensive final. Each exam will be worth 30% of your final grade while the comprehensive will be worth 40%. All exams are online. Make-up exams are not allowed.

**ONLINE EXAM INFO**: Your exams will be posted on Blackboard at 1PM the scheduled day of the exam. The exam will be available until 5PM that day. The exam will be timed to 90 minutes, and you will have only one attempt to complete the exam. The exam **is not** open book or open notes. You are asked to use the GMU Honor Code, as described in the GMU catalog, throughout the exam.

**SCHEDULE**

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| Week 1: May 17, 2021<br>M: Introduction to the Course<br>W: Studying the Nervous System Ch.1<br>F: Electrical Signals of Nerve Cells, Ch.2 |
| Week 2: May 24, 2021<br>M: Voltage Dependent Membrane Permeability, Ch.3<br>W: Channels and Transporters, Ch. 4<br>**F: EXAM 1 (Ch. 1-4)** |
| Week 3: May 31, 2021<br>M: Synaptic Transmission, Ch.5<br>W: Synaptic Transmission, Ch.5/ Neurotransmitters and their Receptors, Ch.6<br>F: Neurotransmitters and their Receptors, Ch.6 |
| Week 4: June 7, 2021<br>**M: EXAM 2 (Ch. 5 & 6)**<br>W: Molecular Signaling within Neurons, Ch. 7<br>F: Molecular Signaling within Neurons, Ch. 7 |
| Week 5: June 14, 2021<br>M: Synaptic Plasticity, Ch.8<br>W: Synaptic Plasticity, Ch.8<br>**F: FINAL EXAM (Ch. 7 & 8 + comprehensive)** |