[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

Recent developments in neuroscience have revolutionized our views of familiar human experiences such as locomotion, substance abuse, mental illness, sleep, and memorization. Through highly enjoyable and selected readings and presentations, we will explore the foundations of this field as well as recent discoveries. The overall objective of this course is to provide students with a basic understanding of neuroscience, enabling them to make important decisions that may affect their lives. Recent scientific research indicates that a worm has 302 neurons, snails have long-term memory, and elephants can hear through their feet. This course will draw on current research in neuroscience to explain why information about other animals is relevant to our lives.

2. Course Goals and Objectives (Approximately 100 words)

By the end of this course students will have an understanding of the nerve cells: their structure, the propagation of nerve impulses and transfer of information between nerve cells, the effect of drugs on this process, and the development of nerve cells into the brain and spinal cord. Why we then move to the sensory systems such as olfaction, hearing, and vision and discuss how physical energy such as light is converted into neural signals, where these signals travel in the brain, and how they are processed. They will also have an understanding of the control of voluntary movement and cover the neurochemical bases of brain diseases and those systems which control motivation, emotion, learning and memory.

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

Neuroscience: Exploring the Brain, 3rd Edition by Mark F. Bear (Author), Barry W. Connors (Author), Michael A. Paradiso (Author)

Tales from Both Sides of the Brain: A Life in Neuroscience by Michael S. Gazzaniga (Author)

4. Reference

Neuroscience: Exploring the Brain book by Mark F. Bear (Author) and Barry W. Connors (Author).

5. Course Requirements and Grades

examinations = 70
assignments = 20
continuos assessment tests = 10

6. Course Calendar

Week	Main Content
1	Organization of the Nervous System
2	The nervous system
3	THE BRAIN STEM
4	Response to injury
5	MPTP Metabolism and PD Neurodegeneration Selectivity.
6	MPTP Metabolism and PD Neurodegeneration Selectivity. 2
7	C.A.T.
8	Genetics
9	Genetics CONTINUED
10	Behavioral Neuroscience AND Electroencephalography
11	TECHNIQUES TO UNDERSTAND THE CHEMISTRY OF NERVOUS SYST
12	Development of transgenic mice
13	GENE THERAPY
14	EXAMINATION