**Neuroscience Curriculum Map**

(see below for full descriptions of student learning goals and outcomes)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Students who successfully complete the minor will be able to***  | ***Introduction to Psychology (Psyc 101)*** | ***Fundamental of Biology (Bio 110)*** | ***Psychology of Perception (Psyc 209)*** | ***Genetics (Bio 331)*** | ***Neuropsychology (Psyc 310)*** | ***Cognitive Neuroscience (Psyc 353)*** | ***Behavioral Neuroscience (Psyc 352)*** | ***Neuropsychophramacology (Psyc 355)*** | ***Experimental Animal Physiology (Bio 365)\**** | ***Neuroscience and Philosophy (Psyc 430)*** |
|  |  |  |  |  |  |  |  |  |  |  |
| ***Goal 1: Understand core concepts within neuroscience*** |  |  |  |  |  |  |  |  |  |  |
| 1.1 Neuronal communication  | **Xa** | **Xa** | **X** |  | **X** | **X** | **X** | **X** | **X** | **X** |
| 1.2 Organization of the brain | **Xa** | **Xa** | **X** |  | **X** | **X** | **X** | **X** | **X** | **X** |
| 1.3 Brain-behavior | **Xa** |  | **X** |  | **X** | **X** | **X** | **X** | **X** | **X** |
| 1.4 Brain based etiology of typical vs. atypical behavior  |  |  | **X** |  | **X** | **X** | **X** | **X** |  | **X** |
|  |  |  |  |  |  |  |  |  |  |  |
| ***Goal 2. Critically evaluate the role of neuroscience in informing socio-cultural and ethical problems.*** |  |  |  |  |  |  |  |  |  |  |
| 2.1 Strengths of neuroscience  |  |  |  |  | **X** | **X** |  | **X** |  | **X** |
| 2.2 Weakness of neuroscience  |  |  |  |  | **X** | **X** |  | **X** |  | **X** |
|  |  |  |  |  |  |  |  |  |  |  |
| ***Goal 3: Develop proficient scientific literacy and analytical skill***  |  |  |  |  |  |  |  |  |  |  |
| 3.1 Proficiency in reading papers in the primary literature  |  |  | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| 3.2 Evaluate the appropriateness of experimental design and the interpretation of the results. |  |  |  | **X** | **X** | **X** | **X** |  | **X** | **X** |
| 3.3 Evaluate claims in mass media against what is known from the scientific literature |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
|  |  |  |  |  |  |  |  |  |  |  |
| ***Goal 4: Effective communication about neuroscience*** |  |  |  |  |  |  |  |  |  |  |
| 4.1 Written communication |  |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** |
| 4.2 Oral communication |  |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** |

 ***aAt the introductory level***

**Student Learning Goals and Outcomes**

Goal 1

Understand core concepts in psychology, biology and/or chemistry, as providing the basis for the scientific study of the nervous system and its relationship to behavior and mental processes.

*Student Learning Outcomes*

1. Demonstrate understanding of neuronal communication via action potential
2. Demonstrate understanding of the general organization of the brain
3. Relate organization of the brain to cognitive processes (such as visual processing, auditory processing, attention and/or memory) via an understanding of functional lateralization and/or hemispheric specialization.

4) Demonstrate understanding of typical and atypical cognitive processes and the pathological mechanisms underlying common diseases and/or disorders of the nervous system

Goal 2

Appreciate, from a liberal arts perspective, the role of the neuroscience perspective to inform issues within the larger cultural, social, historical and ethical framework.

*Student Learning Outcomes*

1) Demonstrate understanding of the strengths of the neuroscience approach in responding to societal, cultural and/or ethical issues such as substance use, poverty, criminal behavior, and/or therapeutic interventions.

2) Demonstrate understanding of the weaknesses of the neuroscience approach in responding to societal, cultural and/or ethical issues such as substance use, poverty, criminal behavior, and/or therapeutic interventions.

Goal 3

Appreciate, from a liberal arts perspective, the role of the neuroscience perspective to inform issues within the larger cultural, social, historical and ethical framework.

*Student Learning Outcomes*

1) Demonstrate proficiency in reading papers in the primary literature by recognizing the research question being investigated and its significance, the hypothesis being tested, and the predictions from the hypothesis.

2) Students should be able to evaluate the appropriateness of the experimental design and the interpretation of the results.

3) Students should be able to evaluate claims in mass media against what is known from the scientific literature.

Goal 4

Demonstrate effective communication about neuroscience in both written and oral form.

*Student Learning Outcomes*

1) Demonstrate effective writing skills

2) Demonstrate effective oral communication skills