

Supplementary Material

1 INSTRUCTOR SURVEY

You are being invited to participate in a research study titled “Incorporation of neuroscience core concepts into the neurobiology major.” This study is being done by Ashley Juavinett, Melinda Owens, and Isabella Maita from UC San Diego. You were selected to participate in this study because you currently teach or have taught a neuroscience course at UC San Diego.

The purpose of this research study is to determine to what extent certain core concepts are incorporated into neuroscience courses at UC San Diego. Your participation in this research should last approximately 10 minutes. If you agree to take part in this study, you will be asked to complete a short survey about your course content.

Your participation in this study is completely voluntary and you can withdraw at any time. Choosing not to participate or withdrawing will result in no penalty or loss of benefits to which you are entitled. You are free to skip any question that you choose.

If you have questions about this project or if you have a research-related problem, you may contact the researcher(s), Ashley Juavinett (ajuavine@ucsd.edu). If you have any questions concerning your rights as a research subject, you may contact the UC San Diego Office of IRB Administration at irb@ucsd.edu or 858-246-4777. By participating in this research you are indicating that you are at least 18 years old, have read this consent form, and agree to participate in this research study. Please keep this consent form for your records.

1. *[Dropdown Item]* For which course are you filling out this survey? (If you would like to submit for more than one course, please submit a second survey.)

- BIPN 140
- BIPN 145
- COGS 17
- COGS 107A
- COGS 107B
- COGS 107C
- PSYC 106
- PSYC 108
- Other:

The following are a list of core concepts that have been proposed for neuroscience curricula:

1. Nervous systems encode and transmit information in various modalities.
2. Nervous system functions are constructed from the combined interactions of smaller constituent components.

3. The similarities and differences in nervous systems between organisms are constrained and defined by their evolutionary backgrounds.
4. Unique patterns of gene expression underlie the organization and function of a nervous system and are altered by environmental factors.
5. Outputs from a unit in the nervous system depend on the inputs it receives as well as information filtering and modulation performed by the unit.
6. Nervous systems function to coordinate survival responses to the environment, permit behavior in a timely manner, and maintain homeostatic regulation.
7. Nervous systems reorganize their structure, function, and connections in response to experience.
8. Structure permits and constrains nervous system function, and function shapes structure.

If you would like more details about what any of the core concepts mean, please go here: <https://www.lifescied.org/doi/10.1187/cbe.22-02-0018#T2>

If you would like some example topics where you may cover each of these concepts, please go here: <https://www.lifescied.org/doi/10.1187/cbe.22-02-0018#T3>

2. *[Matrix Table Item; one answer per row allowed]* The proposed core concepts above are for an entire undergraduate neuroscience curriculum. Your one course may not cover all these topics. To what extent are each of the core concepts **currently** a part of your course content (including lectures and assignments)?

- Not at all
- A little bit (less than one class session; a small portion of one assessment)
- Somewhat (about one class session; a portion of one or more assessment)
- Significantly (more than one class session; multiple assessments)

3. *[Matrix Table Item; one answer per row allowed]* To what extent do you believe each of the core concepts **should** be a part of your course content (including lectures and assignments)?

- Not at all
- A little bit (less than one class session; a small portion of one assessment)
- Somewhat (about one class session; a portion of one or more assessment)
- Significantly (more than one class session; multiple assessments)

4. *[Matrix Table Item; multiple answers per row allowed]* Which aspects of your class include each of the core concepts?

- Lectures
- Discussion
- Assignments
- Exams
- Other

5. *(Optional open ended question)* Are there discrepancies between what you *are* teaching and what you feel you *should* be teaching? If so, what is driving these discrepancies?

6. (*Optional open ended question*) Do you feel the core concepts listed above cover the necessary concepts in neuroscience? Why or why not?

We thank you for your time spent taking this survey.

Your response has been recorded.