Sheridan Lab

PSYC/NCSI 395

Fall 2021 Syllabus

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**Requirements and Grading**

Students receiving PSYC/NCSI 395 for credit in the Sheridan Lab must fulfill the following requirements:

1. **Documentation of completion of the CITI Human Subjects Course**. You can complete CITI training by going to [www.citiprogram.org](http://www.citiprogram.org). Please follow the instructions for completing this course during the first week of courses. You can’t participate in any research activities until this course is completed.

2. **Meet weekly with Dr. Sheridan, a post-doctoral fellow or a graduate student**. These weekly meetings will be one-on-one or in conjunction with graduate student and post-doctoral researchers. Attending meeting is mandatory but they will be scheduled at a convenient time for you. Your supervisor will be in charge of planning your PSYC/NCSI 395 experience for the semester and making sure that you have enough tasks to complete for your registered credit hours in addition to supervising your work in the lab.

3. **A minimum of 9 hours a week of hands-on learning in the lab** through contribution to a specific project. Times when you will be in the lab will be arranged with your supervisor who maybe a graduate student or a post-doctoral fellow. Mentoring undergraduate students for PSYC/NCSI 395 is a significant commitment that your supervisor will be making, so it’s important that you also keep up your end of commitment. You must reliably attend testing sessions, come when you commit to being in lab, and carry out your responsibilities. If you can’t attend your weekly scheduled time, you will need to let your supervisor know in advance and reschedule your time to continue to meet the 9 hour minimum. Meeting your 9-hour minimum every week will comprise 40% of your grade.

\*Exception applies when you are taking 1-2 credit hours instead of typical 3 credit hours. If you are taking only 1 credit hour, you are required to commit a minimum of 3 hours a week. If you are taking 2 credit hours, you are required to commit a minimum of 6 hours a week. Please make sure to inform your supervisor in advance about the number of credit hours you will be taking.

The project you are assigned to will reflect your interests, and your commitment and reliability. Generally, more interesting or advanced projects are assigned to RAs who have demonstrated both capability and reliability in smaller tasks.

4. **Attend lab meeting**. Lab meetings are on Fridays from 9:30am-11am. Attending lab meeting, coming prepared to participate in discussions (e.g., completing required readings beforehand), and contributing to ongoing lab discussions will comprise 30% of your grade.

5. **Final paper & presentation during lab meeting**. You will complete a 10 page paper focused on a particular area of research & you will present the contents of this paper at lab meeting. This can be focused on methodology (e.g., analytic techniques used with EEG) or content (e.g., impact of adversity on prefrontal cortex development). It can be practical (e.g., here is how you do a particular technique & why it is important) or theoretical (e.g., this is what we know about adversity & here is what we’re planning going forward). The paper will reflect learning experiences gained through your lab work and independent reading of research papers. It should include at least 5 references to empirical research papers but can include up to 20 such references. Your paper should abide by APA guidelines and should not go over the page limit of 10 pages. You will receive information on due date for the final paper from departmental PSYC/NCSI 395 administrator.

Your presentation during the lab meeting will be 5-10 minutes long with a 5-minutes Q&A session right after. As such, you should be prepared to give a formal presentation (such as preparing complete set of slides, talking through the slides as you would at undergrad symposiums, etc.) as well as to answer questions from lab members. The guidelines on the content of your presentation are similar to those on your final paper. Before you give your final presentation, you will have a chance to do a practice presentation at an undergraduate meeting led by full-time RAs and solicit feedback. You will then officially present at the lab meeting that takes place around the end of the semester. Dr. Sheridan or the lab manager will notify you about the presentation date once it has been determined.

Your paper & presentation together will comprise 30% of your grade.

**Prerequisites/Skills Required**

To do a PSYC/NCSI 395, you need to have already taken PSYC 101 or NSCI 175 and two additional PSYC or NSCI courses (one of them has to be at 200-level or above). For more information, please see the course requirements dictated on the [department website](https://psychology.unc.edu/undergraduate-research/). Additionally, several skills will be required of you and which you will hone and develop as a result of your participation in this course.

1. **Attention to detail -**  Careful attention to detail is the hallmark of a successful researcher. One thing you will learn through your participation in this lab course is how to pay close attention to even seemingly unimportant details so that you can carry out research tasks reliably.

**2.** **Responsibility** – Research is a team sport & the lab is inherently a team. By participating in this lab course you are committing to becoming part of a team of highly trained, highly committed researchers. You are committing to being a reliable and dependable part of that team. If you can’t be relied on, it will be impossible for you to contribute sufficiently to the team to be a successful researcher in your own right or to receive a passing grade in this class.

3. **Professionalism** – The Sheridan lab works with children and families. Maintaining a professional relationship with children and families through your demeanor, language, behavior, and dress is mandatory. If you need professional development in this area, you will be provided with guidance from Dr. Sheridan and your supervisor.

**Resources**

* Please see [this document](https://docs.google.com/document/d/1Hz6U2b7xvPZrWyIpV7Zec5z_SKY5qFmN1EuykLCw7PU/edit?usp=sharing) for some tips our previous students have shared on succeeding in this class.
* Please see [this folder](https://drive.google.com/drive/folders/1TkVtP7t5QFj1JgMSbIS3jGdLPiMXuKXH?usp=sharing) for example lab presentations our previous students have shared.

**Reading List**

The following are a list of articles which document the work in the lab. Reading them will orient you to the lab theoretically and with regards to methodology.

Furlong, S., Cohen, J. R., Hopfinger, J., Snyder, J., Robertson, M. M., & Sheridan, M. A. (2020). Resting-state EEG Connectivity in Young Children with ADHD. *Journal of Clinical Child & Adolescent Psychology*, *0*(0), 1–17. https://doi.org/10.1080/15374416.2020.1796680

Machlin, L., Miller, A. B., Snyder, J., McLaughlin, K. A., & Sheridan, M. A. (2019). Differential Associations of Deprivation and Threat With Cognitive Control and Fear Conditioning in Early Childhood. *Frontiers in Behavioral Neuroscience*, *13*. https://doi.org/10.3389/fnbeh.2019.00080

McLaughlin, K. A., Sheridan, M. A., & Lambert, H. K. (2014). Childhood adversity and neural development: Deprivation and threat as distinct dimensions of early experience. *Neuroscience and Biobehavioral Reviews*, *47*, 578–591. https://doi.org/10.1016/j.neubiorev.2014.10.012

Meyer, K. N., Sheridan, M. A., & Hopfinger, J. B. (2020). Reward history impacts attentional orienting and inhibitory control on untrained tasks. *Attention, Perception, & Psychophysics*. https://doi.org/10.3758/s13414-020-02130-y

Robertson, M. M., Furlong, S., Voytek, B., Donoghue, T., Boettiger, C. A., & Sheridan, M. A. (2019). EEG power spectral slope differs by ADHD status and stimulant medication exposure in early childhood. *Journal of Neurophysiology*, *122*(6), 2427–2437. https://doi.org/10.1152/jn.00388.2019

Rodriguez-Thompson, A. M., Meyer, K. M., Davidow, J. Y., Van Dijk, K. R. A., Santillana, R. M., Snyder, J., Vidal Bustamante, C. M., Hollinshead, M. O., Rosen, B. R., Somerville, L. H., & Sheridan, M. A. (2020). Examining cognitive control and reward interactions in adolescent externalizing symptoms. *Developmental Cognitive Neuroscience*, *45*, 100813. https://doi.org/10.1016/j.dcn.2020.100813

Sheridan, M. A., McLaughlin, K. A., Winter, W., Fox, N., Zeanah, C., & Nelson, C. A. (2018). Early deprivation disruption of associative learning is a developmental pathway to depression and social problems. *Nature Communications*, *9*(1), 2216. https://doi.org/10.1038/s41467-018-04381-8