PSYC 479 – Special Research Problems in Psychology
Language and Music Cognition Lab

Lab location: BPS 3150
Lab webpage: https://lmcl-umd.github.io/
Instructor / Lab PI: Dr. L. Robert Slevc (he/him) – slevc@umd.edu – office: BPS 1147-E

Course Description

This directed study will provide the opportunity to participate in behavioral and/or neuroscientific research projects in the UMD Language and Music Cognition Lab.

The specific projects you will be involved with will be based on your interests and background combined with the needs of current projects. Your specific responsibilities will also vary depending on the stage of the relevant research project. You might assist with behavioral, EEG, and/or MEG data collection (including preparing for participant lab visits and cleaning up afterwards), recruiting and scheduling participants, data coding, data entry, and/or assisting with data analyses. You may also be asked to perform literature searches, write reports of research findings, and write short blogposts for a general audience on recent research relevant to the lab.

By assisting with research in our lab, you will gain technical and theoretical research skills, interpersonal skills (by working with lab members and human participants), and skills associated with research communication and dissemination. You will also learn about procedures and policies that protect research participants. You will be a contributing member to ongoing research on the cognitive and neural processes involved in language and/or music perception and production. Student involvement in research is critical to much of the scientific work done here at Maryland and we value your commitment to maintaining the high quality of our research process. During this experience, you will learn about theory and current literature in psycholinguistics/neurolinguistics and music perception and cognition. You will also learn more generally about theories and behavioral and neuroscience methods involved in cognitive science / cognitive psychology research. We hope that your experience working in this research lab is rewarding and useful in your academic career.

Learning Outcomes

- Master a selected bibliography of scientific literature related to your project(s)
- Develop research technology skills through hands on experience
- Develop scientific communication skills
- Investigate and pursue science-related career development opportunities

Supervisors

Your primary research mentor is Dr. Slevc, the lab's PI. However, your immediate supervisor / research mentor may be a graduate student or postdoc depending on the specific projects you are working on. Research mentors will supervise your work and are available for lab-related and other questions.

Course Requirements

1. **Hours**. Enrolling for three credits commits you to 135 hours of work (an average of 9 hours/week) on the project(s) to which you are assigned. (Enrolling for two credits may also be

possible, which would commit you to 90 hours, or an average of 6 hours/week.) Scheduled hours are typically flexible, although the degree of flexibility can vary by research project. In general, you should schedule your specific hours at least a week in advance, and ideally farther in advance if posting timeslots for participant signups.

It is important to keep up with your hours. If research tasks are not filling these hours (e.g., because of limited participant signups or pandemic-related research restrictions) then you are expected to work with your instructor to identify other useful ways to contribute (e.g., by working on literature reviews, documenting / writing up aspects of the research, etc.) Students who fall behind in hours can make up time during finals week if necessary, depending on the availability of lab work at the end of the semester. If you get significantly behind in your hours (>10 hours behind where you should be in the term), you should work with your supervisor to make arrangements for completing your hours on time.

When running experiments: One of the most important aspects of a position in a research lab is collecting data (i.e., running experiments). It is crucial that you respect participants' time by being on time yourself and being prepared when running an experiment Your grade will be affected if you are late or miss an assigned shift (see details below in the "Grading" section).

2. **Training / certifications**. It is important that you understand how to protect the rights and welfare of research participants. Thus, before becoming involved in research on human participants, you should first complete an online research ethics course from the CITI program. To do this, create an account at http://www.citiprogram.org and take the online "Social and Behavioral Basic/Refresher" course (be sure to put "University of Maryland, College Park" as an affiliation). Once complete, you should turn in a copy of your completion report. If you have taken this course already (e.g., for experience in another lab) within the past three years, you need not take again. (If it has been over three years, you can take a shorter "refresher" course – contact instructor for details.)

   Various other training courses and/or meetings may be required depending on the specific project(s) you are involved with. These meetings will count toward your lab hours.

3. **Reading assignments**. You will periodically be asked to read materials related to your projects in the lab and/or about psycholinguistic / neurolinguistic research more generally. You may also be asked to read and comment on lab members' work-in-progress, workshop presentations, etc. When lab work is relatively slow (e.g., because of minimal participant signups), a good use of time is to catch up on the background reading listed below and on past published work from the lab (linked on the lab webpage).

4. **Weekly lab meetings.** Weekly lab meetings are required and count towards your total hours in the lab.[1] These meetings provide opportunities to discuss ongoing research projects, giving you greater context for the projects you are working on. These also are valuable in that other lab

[1] Often it is not possible to find a time for lab meeting where everyone is available, in which case we prioritize new lab members and lab members who were not able to meet at a lab meeting the last semester. If this leaves you unable to attend, then of course lab meeting attendance is not required.

members can get feedback from you and other lab members on their work. We also may use these meetings to discuss papers or topics of professional development. We welcome suggestions and requests for these meetings.

Final assignment. The "standard" final assignment is to contribute at least one post to the lab's blog (https://medium.com/langmuscoglab). This post should describe the findings of some resent research that you find interesting and is related (at least tangentially) to the lab's work (i.e., a recent primary source article about language and/or music perception/cognition). It should target an intelligent, but non-expert, audience and, ideally, should also refer to additional relevant sources. More details and some resources for this assignment are posted here: https://lmcl-umd.github.io/doc/example/bloginfo/

This post is due by the last day of classes (unless you ask for an extension), although you are *strongly* encouraged to complete this earlier in the semester so that you can present it in a lab meeting to get feedback and suggestions.

If you do not wish to write and publish a blogpost, you can instead lead a lab meeting on some topic relevant to the lab. You may also negotiate some other assignment. In any case, you are encouraged to talk with your research mentor or Dr. Slevc before beginning the assignment.

Grading

Your supervisors (e.g., graduate student research mentor, the lab manager, and Dr. Slevc) will evaluate your reliability, professionalism, initiative, teamwork, punctuality, positive work attitude, communication, promptness in completing tasks, thoroughness, and knowledge of job. Grades will then be assigned based on your hours completed and the quality of your work as follows:

- Completion of hours 60%
- Final Assignment 10%
- Supervisors' Evaluation 30%

Course policies and other notes

This course is subject to university-wide policies for undergraduate courses, detailed at http://www.ugst.umd.edu/courserelatedpolicies.html. These include policies on academic integrity, student conduct, sexual misconduct, discrimination, accessibility, attendance, absences, missed assignments, student rights, official UMD communications, midterm grades, complaints about final exams, copyright and intellectual property, final exams, course evaluations, and campus resources. A few other topics specific to this class:

- **Confidentiality.** Data we collect is provided by our research participants with the understanding that their identity will remain confidential. Protecting participants' identity and maintaining confidentiality is critical to ethical research. As a research assistant, you may have access to confidential material and it is very important that you do not discuss this information outside the lab. Confidential lab materials should not be removed from the lab and you should not discuss participants outside of necessary discussion for research purposes.

- **Use of email and Slack for official communication.** Prompt communication is essential for an efficient lab environment. You will be expected to reply to emails about lab matters or (more often) messages on the lab Slack channel within 24 hours (48 hours on weekends). Frequent delayed responses could lower your course grade.

- **Graduate school / Career planning.** Any students who would like to discuss graduate school or careers in psychology are encouraged to meet with graduate students, postdocs, or Dr. Slevc for input/advice.

- **Scholarly work.** We encourage students who are interested in investing time, energy, and intellectual contributions above and beyond their lab responsibilities to consider taking on their own project (or aspects of a larger project). This could lead to an honors thesis, result in presenting research locally or at national/international conferences, and even result in co-authoring publications. Please be aware that the opportunity for this level of intellectual contribution and involvement depends not only on your initiative and investment, but also on the opportunities that are currently available.

  Students are encouraged to consider presenting either their independent research or other (non-independent) research with which they are involved at the *PSYC Undergraduate Research Day* in the Spring. If you do this, we expect that you will spend lab hours working on aspects of the project. However, you should expect that planning a presentation will require effort beyond your lab hours, as this is something done for your own professional development. Students can present independently or part of a team depending on their level of experience in the lab and the type of projects available. Students often find this to be an engaging and rewarding experience and we hope you will too.

  There are often opportunities for summer funding to work on independent research through BSOS and through the Maryland Center for Undergraduate Research. If you are interested in pursuing these types of opportunities, please discuss with your lab supervisors.

- **Letters of recommendation.** Dr. Slevc will generally write a letter of recommendation for students who have committed at least two semesters of 3-credits (or 9 hours) to the lab and have performed well. You should ask for the letter well in advance of the deadline. Please realize that the strength of a letter carries more weight than the mere *presence* of a letter. Factors that contribute to a stronger letter include demonstrating initiative and investment in the lab and the projects you are working on, consistent reliability and accountability in your lab hours and projects, and a strong ability to work collaboratively with lab members.

- **Illness.** Please do not come into the lab if you are sick. It is better to cancel an experimental session or fall behind than to risk getting the rest of the lab (and experimental participants) sick.

- **Complaints or problems.** If something is not going as well as you would like, *please tell someone* about it. Talk to your research mentor, the lab manager, or another lab member you feel comfortable with. The lab environment and procedures are always evolving and can always be improved, but we can only improve things if we know what isn't going well.