PSYS 334 - Laboratory in Cognition (1 credit) – WEB

Course Details:

Professor: Dr. Andrew Mienaltowski (Dr. M'ski) Course Website: On Blackboard (wku.blackboard.com)
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Office Hours: TBA (Office 1025 KTH)

Required Materials: A textbook is **not** required. If you have your textbook from cognition, that might be helpful. General explanations for many cognitive phenomena are also available on Wikipedia. Journal articles illustrating research designs used in this course will be provided. WKU students have free access to Office 365: https://www.wku.edu/it/sms/microsoft_sa.php

You will need to sign up for an account with PsyToolkit (https://us.psytookit.org) using your WKU Topper email address. Do **NOT** use a personal email address unaffiliated with WKU. You will use this to do some minor coding work and to share this work with me. I can also share tasks with you via this site. No prior coding experience is necessary. Instructions on how to create your account will be provided as part of the course.

Course Description: Laboratory emphasizing experimental design and data collection in cognitive psychology. ***Pre-requisites for PSYS 334:*** Student must have completed PSYS/PSY 210 and 211 with a grade of C or better, or have permission of the instructor. PSYS 333 is also required but may be taken concurrently with PSYS 334.

Course Objectives: PSYS 334 is a lab course, so hands-on experiential learning will be emphasized. We will explore a number of research designs used to measure phenomena in cognitive psychology like attention, memory, decision making, interference, concept formation, and imagery. For each topic, we will review primary sources (journal articles) that introduce an experimental technique, and we will examine how the phenomenon of interest was operationalized and deployed in a lab. We will explore how to design cognitive tasks using stimulus presentation software. We will generate, process, and analyze data to address research questions posed by the tasks. We will also discuss techniques for clearly communicating our findings relative to the hypotheses that we are testing. More simply put, we will review, create, and experience cognitive psychology.

Below are the learning outcomes for the course:

- Identify experimental design techniques used to address research questions within cognitive psychology
- Investigate theories that underlie cognitive processes explored in laboratories
- Observe the development of databases for response data collected during laboratory experiments
- Interpret data analyses for laboratory experiments relative to the theoretical predictions
- Communicate findings in both oral and written formats
- Develop basic skills in generating stimulus presentation code for cognitive tasks

Course Organization and Activities:

For this course, we will be discussing a number of important experiments in cognitive psychology. We will review journal articles that discuss 7 experiments. The journal articles will serve as a basis for the theories examined with these experiments. Readings will be posted to Blackboard, and you should review these along with videos that discuss them. As you read, note what the authors' main research questions are. Why are they predicting what they are? How are the authors operationalizing the psychological construct under investigation? What measurements are being taken?

Psychological tests have been created to examine the cognitive constructs that we are discussing. You will take part in mini-experiments that ask you to complete each task on PsyToolkit. PsyToolkit will hold all of your data and share it with me so that you do not have to upload files on Blackboard. I will show you how data are transformed to be useable to test hypotheses for each experiment. Through weekly videos, we will discuss how the tasks work and whether the data gathered support the main predictions of those who have developed major theories in cognitive psychology.

(Blackboard) Syllabus quiz. We will begin the course with a syllabus quiz. Please read through this syllabus carefully and then complete the syllabus quiz on Blackboard. The quiz can be found in the Syllabus section of Blackboard. It will consist of True-or-False and Multiple-Choice questions about the syllabus, and it is worth 20 points. You will be given two attempts at the quiz, and your highest score will count. **The syllabus quiz is due by 3PM on Friday, January 19**. You are welcome to complete the syllabus quiz at any point up until the deadline. Late submissions will **not** be accepted.

(PsyToolkit) Tasks. Throughout the term, you will earn points by participating in experiment tasks (9 tasks at 5 points per task = 45 points). We use these tasks to generate data to explore the theories discussed for each of the main topics of the labs. These tasks will be performed in PsyToolkit, so I will share links to the tasks with you on Blackboard. To perform the task, you would click on the link and go to the task, complete the task, and then advance through the remainder of the survey until the browser window closes or redirects you to a related website. Tasks must be completed by the posted deadline. **Deadlines will be 3PM on Fridays.** Late submissions will **not** be accepted.

(Blackboard) Activities. For 7 of the 9 tasks, there will be quiz-like activities that you will complete on Blackboard over the lab tasks, the theories and predictions discussed in the brief video lectures and the readings, and the findings of the labs. Each is worth 20 points (7 activities at 20 points per task) and will include short-answer, true-or-false, and multiple-choice questions. **To prepare for these activities, please jot down notes as you review the materials for the task, including the lectures, the explanations of the results, and any assigned readings for the task (also discussed in the brief lecture)**. These activities will not have a time limit, but you will only get one attempt at the activity. Please be careful not to accidentally submit the activity before you complete it. Blackboard activities will have set deadlines. **Deadlines will be 3PM on Fridays.** After the deadline has passed, you will have a 24-hour grace period to complete the activity for credit. (Again note that all PsyToolkit tasks must be submitted by the deadline and that they cannot be completed after the deadline as noted above.) After this grace period, students forfeit their points for the activity and earn a zero. Requests for extensions beyond this grace period will not be approved. These activities are scheduled throughout the term to scaffold your learning in the course. Consider the Friday deadlines to reflect the end of a window of time over which you can complete the activity. The window starts on Monday of the week and closes at 3PM on Friday.

(PsyToolkit) Coding Projects. Finally, for the second half of the semester, we will shift gears to coding projects so that you have an opportunity to see how cognitive tasks are developed. No prior experience using code is needed to successfully learn this. All students who have completed this lab before have successfully completed the coding projects. I will share some tutorial videos so that you are prepared to code examples of existing tasks as well as a novel one of your own. **Each project must be completed by the deadline. Late submissions are not accepted.** It is important to note that, if you miss the deadline for a project, you still must complete it for no credit to be eligible to complete the next coding project. This may seem harsh, but the deadlines are important to scaffolding the coursework. It is not possible to skip these coding projects for weeks and then complete them all at the end of the term. Given that this is a 1-credit lab course, the workload is carefully distributed to allow for trial-and-error and to give you a chance to reach out to me for support. I will be available to assist you with these projects if you have questions, and we can meet in person or via Zoom.

Summary:
To be clear, there are a few different assignment designations for this course:

- Syllabus quiz – A brief quiz over the expectations of the course communicated in the syllabus **[cannot be submitted late]**
- Task – A cognitive task that you complete given a web link from Dr. M'ski **[cannot be submitted late]**
- Activity – A set of questions or steps that require you to think about material presented to you in the readings or brief video lectures or reviews **[can be submitted up to 24 hours late, see policy below]**
- Project – A coded task developed given instructions by Dr. M'ski **[cannot be submitted late]**

Grading Breakdown:

Syllabus quiz …	20 points
Lab activities (7) …	140 points
Lab tasks (9 @ 5 points)…	45 points
Three programming projects …	75 points
Total	280 points

Grading Scheme: (no rounding)

252 to 280 points	=	A	(4.0)
224 to 251 points	=	B	(3.0)
196 to 223 points	=	C	(2.0)
168 to 195 points	=	D	(1.0)
< 168 points	=	F	(0.0)

Your overall grade in the course will be based on the number of points that you earn. It is up to you to obtain the grade that you want. There will be absolutely no rounding of points when assigning grades.

Late work policy:
Please note that your active participation in this course is important. **You must complete experiment tasks via the links posted to Blackboard by 3PM on Fridays**. Failure to do so will result in a zero (out of 5 points) for that task.

For activities, you should complete them by their appointed due date and time; however, **students can submit late activities within 24 hours of the original deadline without penalty**.

Late submissions will not be accepted for coding projects. These projects will require that you invest time consistently to complete them. If anxious about the projects when assigned, please reach out to Dr. Mienaltowski.

Frequently Asked Questions:
How much time should I expect to invest in each lab? You should expect to invest at least 2 hours of time into each lab; this includes reading the background material, completing the task, reviewing your results, taking notes on the lab (from background materials to findings), and completing the Blackboard activity.

One of my classmates and I work on the class together, what kind of collaboration is allowed? That is fantastic! There's no better way to be engaged than to talk things out with other psychology students who are learning the material. Feel free to talk about the weekly tasks and even compare notes. **That said, you should complete each Blackboard activity on your own. Working together on the activity is cheating.** If discovered, for the first offense, you will receive a zero on the Blackboard activity and PsyToolkit task under consideration. For the second offense, you will receive an F in PSYS 334. Every offense will be reported to the appropriate student conduct office on campus.

When it comes to the coding projects, you are not allowed to share your code with other students or to use other students' code. These projects are meant to help you develop your own personal, professional skills. If you cheat by sharing code or using someone else's code, you will receive a zero on the coding project for the first offense. For the second offense, you will receive an F in PSYS 334. Every offense will be reported to the appropriate student conduct office on campus.

Can I use ChatGPT (or another AI platform) to answer my Blackboard Activity questions? Although you may decide to use artificial intelligence (AI) platforms (like ChatGPT) to assist you in preparing notes for this course, **you cannot copy and paste activity questions into AI platforms to get answers**. There are two reasons for this: (1) YOU WOULD BE CHEATING (i.e., presenting work that is not your own as your own to demonstrate mastery in a learning environment), and (2) the quizzes are my intellectual property (IP) and I do NOT give you permission to share my intellectual property with AI platforms. The second reason is often overlooked. You should not copy and paste other people's IP into AI platforms like ChatGPT without first receiving permission to do so. AI platforms do not appropriately attribute credit for the knowledge they share, and they often hallucinate sources and invent text to present as fact when what is presented is not accurate. If caught doing this, for the first offense, you will receive a zero on the Blackboard activity and PsyToolkit task under consideration. For the second offense, you will receive an F in PSYS 334. Each offense will also be reported to the appropriate student conduct office on campus.

Can I use ChatGPT (or another AI platform) to help me with my Psytoolkit code? AI platforms (like ChatGPT) are not familiar with Psytoolkit. They are familiar with PsychoPy, but we are not using PsychoPy for this course. If you ask an AI platform for advice, it might give you some helpful suggestions for thinking about ways to organize computer coding, but it will not give you the correct answer or do your work for you. If you need help with the coding projects, reach out to Dr. M'ski. These projects are meant to be valuable to developing your professional skills as a psychologist, so please do not treat them as a box on a list to be checked off. Many students who complete PSYS 334 have used the skills that they developed to support their own research activities.

It's 3PM on Friday and I forgot that I had a lab task and activity to do this week. What should I do? Well, you cannot submit lab tasks from Psytoolkit late. So you will have to take the zero on that part of the week. You do however have a 24-hour grace period to complete the Blackboard activity. After this grace period, students forfeit their points for the activity and earn a zero. Requests for extensions beyond this grace period will not be approved.

A lab task and Blackboard activity was due last Friday and I am just realizing this on Monday morning. What should I do? You'll have to move on to the next week's Psytoolkit lab task and Blackboard activity. The prior week's work is no longer available. Be sure that you enter all of the due dates for the lab activities in your planner.

I have so many commitments and do not have time to work on my activities for this class. What should I do? Please drop the class. You'll have one less set of things to worry about. This class is structured with set deadlines. It is not an on-demand class. If you do stay enrolled, be sure that you enter all of the due dates for the course in your planner.

I have a tendency to procrastinate when I take online classes or when asked to do something that I am not familiar with in a class. What should I do? You have accomplished a lot so far on your journey in college. Be confident in yourself and give yourself a chance to try new things. If you get started early and run into an obstacle, you can reach out Dr. M'ski. Learning when to ask for assistance is an important skill to develop. If you do procrastinate and wait until the last minute, you (a) may be setting unfair and unreasonable expectations for yourself, and (b) may not have time to reach out to get assistance.

I have a documented reason for not completing a PsyToolKit lab task, a Blackboard Activity, and/or a coding project, can I get an extension? Should you have documentation for an absence that has kept you away from course work, you should share this with Dr. M'ski. Documentation is required. Acceptable documentation includes info on medical procedures, court dates, jury duty, graduate school interview, professional conference, etc. When an extension is entered, you will have two business days from the deadline or from the end of the excused period to make up the work. Chronic issues that fall under the university's ADA guidelines will require that you seek accommodations from the Student Accessibility Resource Center. Extended absence periods from class may necessitate a medical withdrawal.

Academic Integrity:
You are expected to complete your own work for this course so that activities, tasks, and projects reflect your own effort. All students are assumed to have read the Academic Offenses section of the Student Handbook. Academic offenses are taken extremely seriously and are reported to the Office of Student Life for further action. Specific violations include academic dishonesty, cheating, and plagiarism. Penalties for cheating, plagiarism, and using others' code or sharing code with someone else are discussed earlier in this syllabus. Also discussed earlier is the inappropriate use of AI platforms in this course. If you need assistance, please consult with Dr. Mienaltowski. Cheating and/or plagiarism often takes place because of time management issues. Please reach out to Dr. Mienaltowski if you are struggling to manage your time in this course or others. I am invested in your success and hope that you have a positive experience in this course.

Important information:
The university wants you to be aware that important information relevant to all of your courses can be found at this link: https://www.wku.edu/syllabusinfo/index.php

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Students with Disabilities: In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

There are a few additional points to note. Accommodations are not retroactive. This section of PSYS 334 is online and will not meet in person. Presentation slides from the videos will not be shared.

Title IX/Discrimination & Harassment: Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Sex and Gender-Based Discrimination, Harassment, and Retaliation (#0.070) and Discrimination and Harassment Policy (#0.2040). Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Executive Director, Office of Institutional

Equity/Title IX Coordinator, Ena Demir, 270-745-6867 or Title IX Investigators or Michael Crowe, 270-745-5429. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159. Additional resources are available here.

Online courses and Regular/Substantive Interaction:
The U.S. Department of Education requires that distance education courses must include regular and substantive interaction between students and faculty. For more information about Regular and Substantive Interaction at WKU, please visit the Regular and Substantive Interaction in Online and Distance Learning webpage (https://www.wku.edu/citl/rsi.php).

In this course, regular and substantive interaction will take place in the following ways:

- Individualized feedback will be given directly to students on their work within Blackboard
- Students will be able to ask questions of the instructor via e-mail, phone, and Zoom, as well as attend live office hours to seek assistance

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In this course, regular and substantive interaction will take place in the following ways:

- Weekly announcements
- Timely and detailed feedback on assignments provided within one week of submission
- Assignments scheduled throughout the course of the term on a regular, predictable schedule
- Availability of live office hours held in person an electronically to support student learning

Course Schedule

(exact dates and topics are subject to change given progress that we make in course, weather, unanticipated technical challenges that may emerge in the computer programming, or flu/Covid-19-related issues)

PSYS 334 Laboratory in Cognition			
Week	**Dates**	**Activity with Reading (points)**	**Task (5 points each)**
Week 1	Jan 16-19	Syllabus and Orientation to Class	**Memory Task**
Week 2	Jan 22-26	**Memory Activity (20)**	**Cueing Task**
Week 3	Jan 29 - Feb 2	**Cueing Activity (20)**	**Visual Search Task**
Week 4	Feb 5-9	**Visual Search Activity (20)**	**Stroop Task**
Week 5	Feb 12-16	**Stroop Activity (20)**	**Flanker Task**
Week 6	Feb 19-23	**Flanker Activity (20)**	**Mental Rotation Task**
Week 7	Feb 26 - Mar 1	**Mental Rotation Activity (20)**	**Simon Effect Task**
Week 8	Mar 4-8	**Simon Effect Activity (20)**	
Week 9	Mar 11-15	**Simon Effect Programming Tutorial**	
-	Mar 18-22	**Spring Break**	
Week 10	Mar 25-29	**Simon Effect Project (25)**	**Simple RT Task**
Week 11	Apr 1-5	**Tutorial on Programming Simple RT task**	
Week 12	Apr 8-12	**Simple RT Project (20)**	**Final Project Task**
Week 13	Apr 15-19	Final Programming Project	
Week 14	Apr 22-26	Final Programming Project	
Week 15	Apr 29 - May 1	Submit **final project (30)** due Wed May 1	
All task participation and activities will be due on Fridays at 3PM except during final exam week, where the deadline is Wednesday, May 1 at 3PM			
Coding project deadlines will also be specified when project instructions are provided.			