

P435

"Laboratory in Human Learning and Cognition"

Required Textbooks:

1. Silvia, P. J. How to Write A Lot. (Paper)
2. Gastel, B. & Day, R. A. How to Write and Publish a Scientific Paper. (8th Edition) (Paper)
3. Honos-Webb, L. Brain Hacks: Life-Changing Strategies to Improve Executive Functioning. (Paper)

Learning Goals and Objectives of P435:

- You will learn how to formulate meaningful research questions.
- You will learn how to design well-controlled research studies.
- You will learn how to interpret and understand research findings.
- You will learn how to write up research reports of your research findings.
- The topics covered in this class will be personally relevant to you.
- The approach to doing research in this class will increase your “scientific literacy.”
- The organization and writing skills you acquire will be useful to you after you graduate IU.

Course Description:

In this laboratory course we will cover several core topics in the field of human learning and cognition. The topics will cover: (1) false/implanted/illusory memories, “misinformation” and “fake news (2) immediate memory span, and (2) recognition memory. The major emphasis of this course will be on actual “hands-on” laboratory experience related to these topics. The course will involve designing and carrying out three experiments, analyzing the results and writing up a report of each experiment. The course will focus on writing up the results of each of the experiments according to the standard APA journal format used to communicate scientific information in the field of cognitive psychology and cognitive science. Please be advised that this is a difficult and very demanding laboratory course.

Class Format:

The course will have at least two and a half hours of lecture per week dealing with the particular topic under consideration and at least 10-15 hours of additional laboratory work, perhaps even more depending on the particular experiment. The remaining time each week will be devoted to collecting data for each experiment, interpreting the results and writing a report. The data from each experiment will be analyzed and discussed in class and then students will go home and write-up their own individual laboratory reports. The preparation of lab reports will require an additional amount of your own personal time above and beyond actual class. Please consider these time requirements seriously. This is a laboratory course. ***“Writing is thinking.”*** Writing is not easy and each report will require a substantial amount of personal time and effort. This course is extremely demanding because you have to: collect and analyze research data, interpret and understand the results and then write up a coherent and comprehensible report of your findings on your own personal time schedule. The teaching assistant (TA) and I will be available to help you along the way but you have to write your own reports yourself. Success in completing these lab reports is highly dependent on executive functioning, cognitive control processes

related to organization, planning and self-regulation and keeping your attention focused on writing while inhibiting distractions in your environment.

Requirements of the Course:

Each student will be required to carry out three complete experiments and write up three lab reports. In all cases, the general problem of theoretical interest will be presented first in lectures in class by Professor Pisoni and Willa. An experiment will then be proposed. Each student will be required to recruit 5-10 participants to serve as subjects in each experiment. A written lab report will be required for each of these three experiments. Due dates are provided below.

Examinations and Grading Policy:

75% of your final grade in P435 will be based on the evaluations of the three laboratory reports (100 points for each lab report); 25% of your final grade will be based on two take-home essay quizzes, one quiz after the first week of class and one quiz at the end of the course. Both quizzes are based on material presented in lectures and required reading assignments.

Late Reports and Exams:

All laboratory reports and the two take-home quizzes are due back at the stated deadlines. Late reports and exams will be penalized one full letter grade (10 points) for each day (24 hrs.) late! There are no exceptions to this policy. There are no options for “extra-credit” in this class.

Attendance and Participation:

Everyone is expected to be present for the lectures and the class time devoted to data analysis, interpretation and discussion of the results of each experiment. If you have a medical condition that will affect your attendance in class, please talk with me and we can work with Disability Services for Students to find an appropriate accommodation. This must be done **within the first week of the start of the semester**. Simple cases such as the need to deal with a family issue or to go to the IU health center do not require documentation, but multiple absences will require formal documentation from a doctor or CAPS.

Social Media:

Texting and use of social media are activities that are strictly forbidden during my lectures and class times. If you feel distracted by someone using a laptop inappropriately in class, please bring this to my attention (during/after class, in a private email, or with the anonymous feedback link), and I will ask the individual to close his/her laptop or leave the class. If you use your cell phone for texting in class, I will ask you to put it away or leave the class. Texting during my lectures is strictly forbidden!

Academic Integrity and Plagiarism:

The advent of the web makes it very easy to plagiarize or copy text from other sources. Every word in your assignments must have been typed by you and must be your own ideas or your own interpretation and summary of the ideas of others. You shall not copy and paste nor shall you copy word for word the text of others. Citing the copied text does not give you license to copy other people's text. If they wrote it, you must rephrase it or you will be accused of stealing the writing of others. It takes effort to create a sentence, and when you use the construction of others you are plagiarizing. Making such effort

has widely been shown improve retention. It is also important to keep track of your notes; if you copy to notecards you need to indicate whether these are your words or words of other people. If you are worried about this, read the passage in the other work, think about it, and then re-phrase it in your own words. Do not try to change a few words to try to mask your plagiarism. Rewrite everything in your own words. Finally, cite the passage with the appropriate APA style reference.

As per University policy, in all cases of academic misconduct or dishonesty the event must be reported to the Dean of Students at IUB. We will spend time discussing issues regarding plagiarism, and it is your responsibility to avoid situations that may be regarded as such.

We treat academic misconduct very seriously, and you may not only fail P435, you may fail with an FI or WI, which indicates on your transcript that you failed (or withdrew) due to academic misconduct.

Lecture and Laboratory Schedule

Week:	Class Activities:
1. <u>DBP Lecture: ppts</u>	<ul style="list-style-type: none"> - <u>Introduction to P435: Goals and Objectives</u> - Read Yngve paper 'How to do scientific research' - Read Roediger paper 'Relativity of Remembering: Why the Laws of Memory Vanished' - Read Gastel & Day book 'How to Write and Publish a Scientific Paper' - Read Honos-Webb book 'Brain Hacks: Life-Changing Strategies to Improve Executive Functioning.'
2. <u>DBP Lecture: ppts</u>	<p><u>Lab #1 – Introductory Lecture: ("False/Implanted Memories")</u></p> <ul style="list-style-type: none"> - Read Paul Silvia's book 'How to Write a Lot.'
3. <u>STUDENT CONSULTATIONS</u>	Run Subjects, Collect Data & Analyze Results
4. <u>DBP Lecture: ppts</u>	Interpretation & Class Discussion of Results of Lab #1
5. <u>STUDENT CONSULTATIONS</u>	Write Up Research Report No. 1
6. <u>DBP Lecture: ppts</u>	<p><u>Lab #2 – Introductory Lecture: ("Immediate Memory Span")</u></p>
7. <u>STUDENT CONSULTATIONS</u>	Run Subjects, Collect Data, & Analyze Results
8. <u>DBP Lecture: ppts</u>	Interpretation & Discussion of Results of Lab #2

9. **STUDENT
CONSULTATIONS**

Write Up Research Report No. 2

10. **DBP Lecture: ppts**

Lab #3 – Introductory Lecture: (“Recognition Memory”)

11. **STUDENT
CONSULTATIONS**

Run Subjects, Collect Data, & Analyze Results

12. **DBP Lecture: ppts**

Interpretation & Discussion of Results of Lab #3

13. **STUDENT
CONSULTATIONS**

Write Up Research Report No. 3

14. **STUDENT
CONSULTATIONS**

**** 2nd Take-home Quiz**

15. **DBP Lecture: ppts**

Summary and Course Wrap Up: Goals and Objectives of P435;
Review and Discussion of Responses to 2nd Take-home Quiz

16. **** Final Exams****

(Final Exam Week: No Classes in Session)
