RESEARCH METHODS IN BEHAVIOR ANALYSIS
BEHV 5140, Fall 2018
Credit Hours: 3
Place: Cury 210
Tuesdays 6:00 p.m. – 8:50 p.m.

Instructor: Joseph D. Dracobly, Ph.D., BCBA-D
Office: Chilton Hall 360A
Office Hrs: Tuesdays & Thursdays 9:30 a.m. - 10:30 a.m.
Tuesdays 1 p.m. - 3 p.m. or
By appointment
Email: joe.dracobly@unt.edu

COURSE DESCRIPTION
This course provides an overview of strategies and tactics of experimental design in behavior analysis. This includes discussion strengths and weaknesses of single organism methodology in basic and applied research. The topics include issues of experimental logic, experimental control, variability, data analysis and display, and interpretation of experimental findings.

ESSENTIAL LEARNING OUTCOMES
• Identify and define common within-subject experimental designs
• Determine and define the conditions under which different within-subject experimental designs are applicable
• Define terms relevant to research methods
• Describe common strategies and tactics of measurement in behavior analysis, including direct observation and interobserver agreement
• Identify and describe common threats to internal validity
• Describe general issues in single case research, including generality of results, direct and systematic replication, steady states and transition states, choosing an appropriate baseline, designing appropriate control conditions, and tracking down sources of variability
• Describe statistical analysis, with a focus on within-subject designs
• Critically evaluate research methodology in published research
• Write and present a research proposal

TEXTBOOKS & MATERIALS
OTHER READINGS

- Baer, D. M. (1975). In the beginning, there was the response. In E. Ramp & G. Semb (Eds.), Behavior Analysis: Areas of Research and Application (Ch. 2, pp. 16-30). Englewood Cliffs, NJ: Prentice-Hall.


ATTENDANCE/MAKE-UP POLICY
Attendance is important for obtaining information from lectures, and for taking exams and completing in-class assignments. Students with religious obligations, severe medical illnesses, or family problems need to contact me IN ADVANCE to discuss the situation. To contact me with such issues, send me an e-mail or talk to me in person rather than leaving a message on my office phone. Out of fairness, I can only make special arrangements and give incompletes when students contact me beforehand. I recommend that you send me an e-mail and provide me documentation whenever you need to miss class due to legitimate reasons. It is not enough to tell me about absences, I need a permanent record (i.e., an e-mail and/or a note).

CLASSROOM BEHAVIOR
I expect you to attend class fully prepared with appropriate materials and electronic devices silenced. You can use laptops, tablets, smartphones, and other devices to take notes and view files related to the class, but not for other purposes.

CLASS PARTICIPATION
In-class activities will be conducted during most class meetings and a few will be conducted outside of class and discussed in class. You will occasionally be asked to present selected research articles as part of in-class activities; these dates are notated on the schedule at the end of the syllabus. The points you earn for class participation will be based on both the quality and quantity of your participation.

DISCUSSION QUESTIONS
You will turn in ONE discussion question for each week prior to each class meeting (there may be exceptions to this that will be discussed in class). The questions need to be submitted via Canvas by 12 p.m. on Tuesday (i.e., prior to class). The best questions are those that are likely to generate discussion and debate during the class meeting; that is, questions that do not necessarily have a straightforward answer. However, questions may also request clarification of the reading material. Please bring your questions to class (printed or on your laptop), and be prepared to read them to the class if requested. The points you earn for discussion questions will be based on the quality of your question.

EXAMS
There will be three exams during the semester according to the schedule presented at the end of the syllabus. The exams will be in the form of short answer questions. Each exam will cover the material since the last exam. The last 30 min of the designated class meetings will be used for the exam. If you are absent and have not made arrangements to take the exam ahead of time, a grade of zero will be given for that exam. Every you will have the option of dropping your lowest exam grade at the end of the semester and take a make-up exam during the last class period (during finals week).
RESEARCH SUMMARIES
You will write **FIVE** research summaries. These will involve describing the critical features of the study and then describing how you would replicate/extend/expand the study. You will use five articles, that you choose (from a pool I provide), to accomplish this. Further instructions will be given in class.

RESEARCH PROSPECTUS
You will select a research topic and write a research prospectus, including an introduction (literature review, rationale, and research question) and methods section. I will provide guidance throughout the semester. Note that approximations to the final product will be due on throughout the semester (see schedule). Please submit the document via Canvas on the due date; do not turn in a paper copy. The document should be in Word format, so that I can use the track changes and embedded comments features. When turning in revised versions, please make sure you send a “clean” document. This means that after you do the needed editing, accept all changes and turn off the “track changes” feature. You should also delete all embedded comments, unless you want to respond to the comment. There will be specific length and content guidelines for each version of the proposal, and these will be described in class, in handouts, and in files posted on Canvas.

PRESENTATION
At the end of the semester, you will give a brief presentation (no longer than 10 min) based on your research proposal. The presentation should cover all relevant parts of the proposal and must be professionally designed and delivered. You should be prepared to answer questions from your classmates and I following the presentation.

RE-GRADE POLICY
If a student disagrees with an evaluation of an assignment, a re-grade request may be submitted within one week of receipt of the grade in question. The request must contain a full explanation of the point of contention, as well as a copy of the assignment. Re-grade requests will be evaluated only once, and may result in no grade change, or a higher or lower grade being awarded.
GRADING

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<tr>
<th>Item</th>
<th>Each</th>
<th>Number</th>
<th>Total</th>
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<tbody>
<tr>
<td>Exams</td>
<td>50</td>
<td>3</td>
<td>150</td>
</tr>
<tr>
<td>Research Prospectus: Research Question &amp; Rationale</td>
<td>20</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Research Prospectus: Introduction &amp; Methods</td>
<td>25</td>
<td>1</td>
<td>25</td>
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<tr>
<td>Final Research Prospectus</td>
<td>100</td>
<td>1</td>
<td>100</td>
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<tr>
<td>Research Prospectus Presentation</td>
<td>25</td>
<td>1</td>
<td>25</td>
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<tr>
<td>Article Summaries &amp; Extensions</td>
<td>20</td>
<td>5</td>
<td>100</td>
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<tr>
<td>Class Participation</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Discussion Questions</td>
<td>5</td>
<td>10</td>
<td>50</td>
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Grade Points

A >513
B 456-512
C 399-455
D 342-398
F <342

*I reserve the right to change the schedule as necessary. All changes will be announced.

ACADEMIC INTEGRITY STANDARDS AND CONSEQUENCES
According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when you engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA ACCOMMODATION STATEMENT
UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

EMERGENCY NOTIFICATION & PROCEDURES
UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.
<table>
<thead>
<tr>
<th>Date</th>
<th>Readings</th>
<th>Topic(s)</th>
<th>Due</th>
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<tbody>
<tr>
<td>8/27</td>
<td>Syllabus/Course Introduction</td>
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| 9/3   | J&PCh3; Sidman Chapter 1           | 1. Introduction to within-subject experimental designs  
2. Research questions | CITI Training ([http://research.unt.edu/faculty-resources/research-integrity-compliance/human-subjects-irb/irb-training-and-resources](http://research.unt.edu/faculty-resources/research-integrity-compliance/human-subjects-irb/irb-training-and-resources)) |
| 9/10  | Sidman Chapter 2                   | 1. Reliability and generality of results  
2. General considerations |                                                                      |
| 9/17  | Topic Identification Day           | Topic Identification Day  
2. General considerations | Topic Identification + 3 Articles                                      |
Graphs  
Research Prospectus: Research Question & Brief Rationale + 3 More Articles |                                                                      |
| 10/1  | Sidman Chapters 3-4                | Replication                                                              | Exam 1                                                              |
| 10/8  | Sidman Chapters 5-6  
Baer (1977)  
Machado (1989)  
Page & Neuringer (1985) | Variability  
Type I & II errors | Article 1 Summary & Extension                                          |
| 10/15 | Sidman Chapters 8-9  
Baer (1975) | Reversal designs  
Changing criterion designs  
Multiple baseline/probe designs |                                                                      |
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<tr>
<th>Date</th>
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<th>Due</th>
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<tr>
<td>10/22</td>
<td>Sidman Chapter 10&lt;br&gt;Sindelar et al. (1985)&lt;br&gt;Kratochwill et al. (2010)</td>
<td>Multielement designs&lt;br&gt;Standards for within-subject designs</td>
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<td>10/29</td>
<td>Sidman Chapter 10&lt;br&gt;Sindelar et al. (1985)&lt;br&gt;Kratochwill et al. (2010)</td>
<td>Multielement designs&lt;br&gt;Standards for within-subject designs</td>
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<tr>
<td>11/5</td>
<td>NONE</td>
<td>Keeping Current with the Literature&lt;br&gt;Article 2 Summary &amp; Extension&lt;br&gt;Research Prospectus Draft 1 Due (Friday, 11/8)</td>
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<td>11/12</td>
<td>Sidman Chapters 11-12&lt;br&gt;Thompson &amp; Iwata (2005)&lt;br&gt;Perone (1991)</td>
<td>Control techniques&lt;br&gt;Free-operant research&lt;br&gt;Pretest-Posttest designs</td>
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<td>11/19</td>
<td>Peterson et al. (1982)&lt;br&gt;Vollmer et al. (2008)</td>
<td>Procedural fidelity</td>
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<tr>
<td>11/26</td>
<td>NONS</td>
<td>NONE</td>
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<tr>
<td>12/10</td>
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<td>1. Research prospectus presentations</td>
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**Notes:**
- **Date Format:** MM/DD
- **Due Dates:** Specific due dates are listed for each date entry.
- **Research Prospectus:**
  - Draft 1 due (Friday, 11/8)
  - Draft 2 due (Friday, 12/13)
- **Exams:**
  - Exam 2 (Friday, 11/15)
  - Exam 3 (Friday, 12/10)