COURSE SYLLABUS

DIVISION: Theoretical and Behavioral Foundations
PROGRAM AREA: Educational Psychology
COURSE: EDP 7104--Research Methods in Applied Behavior Analysis
COURSE CREDIT: 3 Semester Hours
TERM/YEAR: Spring/Summer 2017
COURSE LOCATION: WSU--Oakland Center - 33737 W 12 Mile Rd, Farmington Hills
DAY/TIME: Wednesday 6:00-8:50
INSTRUCTOR: Teryn Bruni, PhD., BCBA
OFFICE: N/A
OFFICE HOURS: by appointment
OFFICE PHONE: 989-817-1766
EMAIL: tbruni@wayne.edu

COURSE DESCRIPTION:

Course includes an overview of research method techniques, theoretical foundations of empirical research, principles of the scientific method, experimental designs, analyses of research designs, research protocol, and formation of research hypothesis. The majority of the course will be devoted to methods related to single-case research (i.e., data collection, logic, designs).

This course is open to graduate and post-graduate students interested in obtaining knowledge of Behavior Analysis and certification as a Board Certified Behavior Analyst (BCBA). Students are expected to read professional literature, participate in discussions, complete literature research, and practice the application of behavioral principles. Completion of assignments and class participation are essential to meeting the course objectives.

COURSE OBJECTIVES:

After completing this course students will:

1. Understand the scientific method and determine what is science and pseudoscience.
2. Be able to analyze current research in the literature and identify flaws in the research method.
3. Be able to develop a research protocol and apply for permission to conduct research within a research-based institute.
4. Be able to develop a research hypothesis and a single subject design for implementation
PREREQUISITES: Foundations of Applied Behavior Analysis and Behavioral Assessment

3 SEMESTER HOURS (45 hours towards BCBA content)
Students will receive the following course content towards BCBA requirements:
- 25 hours of Measurement
- 20 hours of Experimental Design

Required Texts:


Readings:


**Course Outline:** *Please see the reading list below. All readings are due on the date listed. Readings are tentative and additional readings will be provided by the instructor as necessary.*

<table>
<thead>
<tr>
<th>Session</th>
<th>Reading</th>
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| 1 5/10/17 | **Scientific Method History & Dependent and Independent Variables**  
Step 2 & 3 Bailey & Burch  
MacDuff (1993) article  
Macdonald et al. (2009) article  
Howard et al (2005) article  
Assignment  
• No Quiz |
| 2 5/17 | **Experimental Design-I**  
Step 7 Bailey & Burch  
Chapter 7 & 9 Cooper, Heron, Heward  
Pierce & Schreibman (1994) article  
Horner, et. al. (2005) article  
Assignment  
• No Quiz |
| 3 5/24 | **Experimental Design-II**  
Chapter 8 & 9 Cooper, Heron, Heward  
Rapport et al. (1982) article  
Barlow & Hayes (1979)  
Hartmann & Hall (1976)  
Assignment |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 4    | 5/31 | Quiz 1 due (Scientific Method and Dependent and Independent Variables)  
Topic for Presentation due (5pts toward final project grade)  
**Science vs. Pseudoscience Introduction**  
Chapter 1 Bailey & Burch  
Review/Questions on Experimental Design-II  
Assignment  
• Quiz 2 due (Experimental Design-I)  
*This class will be taught via video conference – You will still attend class as per usual.*  
| 5    | 6/7  | **Science vs. Pseudoscience Discussion**  
**Data Recording and Cumulative recorder**  
Steps 5 & 6 Bailey and Burch  
Assignment  
• Quiz 3 due (Experimental Design –II – Single Case Designs)  
• Research Project Outline – 1 (Outline and 5 articles) due  
| 6    | 6/14 | **Graphing I**  
Chapter 10 Bailey & Burch  
Chapter 6 Cooper, Heron, Heward  
JABA Guidelines for the preparation of figures  
Assignment  
• Quiz 4 due (Data Recording and Data Collection)  
• Research Project Outline 2 (Research Design and Data Collection) due  
| 7    | 6/21 | **Empirical vs. Correlational**  
Chapter 1, Cooper, Heron, Heward  
Chambless & Ollendick (2001) article  
Chambless et al., An update on empirically supported therapies (pdf)  
Recommended  
Bell Curve Ch 3 and Appendix I (pdf)  
Assignment  
• Graphing Assignment Due – Turn in a hard copy of this assignment  
• MIDTERM - Take Home Exam available on BB  
• No Quiz  
| 8    | 6/28 | **Integrity and IOA**  
Step 9 Bailey & Burch  
Chapter 5 Cooper, Heron, Heward  
Recommended  
• Sidman, ch 2  
**Social validity**  
Step 4 Bailey & Burch  
Callahan et al (2008) article  
Cooper, Heron, & Heward p. 55-65, 237-243, 250-251  
Van Houten (1979) article  
Assignment |
### Expectations:
1. Students are expected to attend class sessions.
2. Students are expected to read the assigned materials prior to the class, integrate the information and participate in class discussions of the materials.
3. Students are expected to engage in respectful discourse.

### Evaluations:
1. **Weekly Quizzes**: Most weeks you will be required to complete a quiz on the previous week’s material on blackboard BEFORE the start of class. These quizzes will be mostly multiple choice and short answer format. They will be timed and you can only have one attempt for each quiz. You will have 15 minutes to complete the Quiz (**10 pts each**)
2. **Class Participation**: Readings are to be completed prior to the class session for which they are assigned. You will be graded on class participation each class you attend. At the beginning of each class you will be required to prepare at least 3 questions from the assigned readings. These questions will be discussed in class. At the end of the class you will provide a rating out of 5 for yourself rating your level of participation during the
class and your completion of your readings in preparation for class. Your attendance, your questions, and your rating of your own participation will be considered in your total participation grade for that class (5 points each).

3. Three assignments will be given to assist with your final project completion.
   a. **Topic Description:** Provide a summary of your proposed research topic that includes a defined research question, a description of why you chose this topic (why does this topic need to be researched?), and state the research hypothesis. This assignment will go toward the final project grade (5 pts toward final project grade).
   b. **Research Project Outline 1:** Provide a detailed outline of your proposed research project along with 5 articles. You will be required to summarize each article on the outline provided (25 points).
   c. **Research Project Outline 2:** Hand in a description of the research design you will be using and the type of data you will be collecting. You should provide a rationale for why you selected that particular design (25 points).

4. **Graphing Assignment:** You will be given a case and data set and you will be asked to graph the data using the graphing standards discussed and practiced in class (25 points).

5. **Final Project:** A written report and final class presentation will be given on a real or fictitious ABA-based research project that you will develop. A rubric will be handed out to outline the expectations of the research project (100 points).

6. **Exams:** There will be two examinations, a midterm and a final. The answer format will be a combination of short essay and multiple choice. The midterm will cover material through week 7 and will be available on blackboard. You will complete the Midterm as a take home exam. You will have two weeks to complete it before class on week 9. The final will cover material from week 1 to the end of the course. Multiple choice questions will total 40 points, and the essays will total 60 points (100 points each exam).

### Grade Breakdown:

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Points</th>
<th>Percentage of Total Grade</th>
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<tbody>
<tr>
<td>Weekly Quizzes</td>
<td>80 pts (10 pts each x 8)</td>
<td>15%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>65 (5 pts each class x 13)</td>
<td>13%</td>
</tr>
<tr>
<td>Topic Description</td>
<td>5 pts (toward final project grade)</td>
<td>-</td>
</tr>
<tr>
<td>Research Project Outline 1: Outline and 5 articles</td>
<td>25 pts</td>
<td>5%</td>
</tr>
<tr>
<td>Research Project Outline 2: Description of Design and Data Presentation</td>
<td>25 pts</td>
<td>5%</td>
</tr>
<tr>
<td>Graphing Assignment</td>
<td>25 pts</td>
<td>5%</td>
</tr>
<tr>
<td>Research Project and Presentation</td>
<td>100 pts</td>
<td>19%</td>
</tr>
<tr>
<td>Midterm</td>
<td>100 pts</td>
<td>19%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100 pts</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>520</strong></td>
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### FINAL GRADES:
The following grading scale will be applied based on the total number of points accumulated by the semester end (400 points possible):

- **A** 95% +
- **A-** 90-94%
- **B+** 87-89%
- **B** 83-86%
- **B-** 80-82%
- **C+** 77-79%
- **C** 70-76%
- **Fail** 69% -

**ATTENDANCE AND PARTICIPATION:**

- 4. Students are expected to attend class sessions.
- 5. Students are expected to read the assigned materials prior to the class, integrate the information and participate in class discussions of the materials.
- 6. Students are expected to engage in respectful discourse.

**STUDENT USE OF LAPTOP COMPUTERS IN CLASS**

Students may, of course, use laptop computers in class. However, it is not acceptable to be doing anything on them except taking notes. Other activity on laptops is distracting to others, including the instructor, and is generally disrespectful to the educational process. Those who violate this will not be permitted to use a laptop in class.

**STUDENT USE OF PHONES IN CLASS**

Absolutely no texting or other phone use is allowed during class. Except under unusual circumstances, phones should be put away and not be on top of your desks. In the case of a true emergency, students are expected to step out of class in order to respond to it.

**WITHDRAWAL POLICY:**

Students who withdraw from a course after the end of the 4th week of class will receive a grade of WP, WF, or WN.

- WP will be awarded if the student is passing the course (based on work due to date) at the time the withdrawal is requested
- WF will be awarded if the student is failing the course (based on work due to date) at the time the withdrawal is requested
- WN will be awarded if no materials have been submitted, and so there is no basis for a grade

Students must submit their withdrawal request on-line through Pipeline. The faculty member must approve the withdrawal request before it becomes final, and students should continue to attend class until they receive notification via email that the withdrawal has been approved. Withdrawals can be requested at any point from the fifth week of class through the study day.

**ACADEMIC DISHONESTY, INCLUDING PLAGIARISM:**

No form of academic dishonesty will be tolerated. It is completely assumed that not only do you already know to avoid plagiarism, cheating, etc., but also that you have read your Graduate Handbook and other formal WSU documents describing your responsibility as a student. Particularly on
assignments such as those in this course, you must also paraphrase others' writing and never use verbatim statements without direct quotes and page numbers.

**Plagiarism**

Plagiarism includes copying material (any more than 5 consecutive words) from outside texts or presenting outside information as if it were your own by not crediting authors through citations. It can be deliberate or unintended. If you're in doubt about the use of a source, cite it. Students caught plagiarizing information from other sources will receive a failing grade in the course. University policy states that students can be subject to multiple sanctions, from reprimand to expulsion as a consequence of academic dishonesty. To enforce this policy, all outside references must be submitted with assignments.

It is the policy of this course that in cases of academic dishonesty, a grade of F is assigned for the course and charges may be filed with the WSU Judicial Officer. WSU also has policies about this. The following is taken directly from the WSU Graduate Bulletin:

*Deception, Fraud and Misuse of Documents*

Intentionally furnishing false information to the University is explicitly prohibited, as is forgery, alteration, unauthorized possession, or misuse of University documents, records and identification cards. The University reserves the right to rescind degrees if the award of the degree was based in whole or in part on deception, fraud, other unacceptable academic conduct, or misuse of University documents.

**REFERENCING:**

When referencing others' work, you must paraphrase unless you use quotation marks to indicate that it is a direct quote, and indicate the page number from which you obtained the statement(s). Be sure to never use others' work and claim it as your own. Also, minimize the number of direct quotes. You must describe others' work in your own words and then cite the authors accordingly. Cite authors in the order in which their names were published. You never reorganize the authorship order. That order is determined by level of contribution to the article. See additional handout posted on Blackboard on how to create references using APA style.

**WRITING SKILLS:**

Quality writing skills are necessary for any career, especially one in the educational profession. For those students who have under-developed writing skills, WSU has a writing center, which can be found at [http://www.clas.wayne.edu/writing/](http://www.clas.wayne.edu/writing/). The mission and services offered at the Writing Center can be found at on that website. There is also an online writing center (HOOT), which provides students the opportunity to converse with Writing Center staff online. See [http://www.clas.wayne.edu/unit-inner.asp?WebPageID=1330](http://www.clas.wayne.edu/unit-inner.asp?WebPageID=1330) for information about HOOT. The site also has a list of additional resources.

**ATTENTION STUDENTS WITH DISABILITIES**

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The
Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TDD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services’ mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

Please be aware that a delay in getting SDS accommodation letters for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to get your accommodation letters as early in the semester as possible.

**SDS NEWS:**

Effective Fall semester 2010 Student Disability Services will be implementing a revised alternative testing form when a student schedules classroom exams/quizzes administration at SDS. As before the student and instructor each have a portion to complete. Exams are to be mailed to a new password protected email address: sdsexams2010@wayne.edu.

**RELIGIOUS OBSERVANCE POLICY:**

Because of the extraordinary variety of religious affiliations represented in the University student body and staff, the Wayne State University calendar makes no provision for religious holidays. It is University policy, however, to respect the faith and religious obligations of the individual. Students who find that their classes or examinations involve conflicts with their religious observances are expected to notify their instructors well in advance so that alternative arrangements as suitable as possible may be worked out.