



TLL 2590 Research Seminar in Special Education Fall 2024

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| Course Instructor: Johanna Higgins, PhD, BCBA-D Assistant Professor of Practice in ABA Department of Teaching Learning & Leading University of Pittsburgh Email: jhiggins@pitt.edu | Day/Time: Mondays/6:00 – 8:30 PM EST Location: WWPH 5400 Office hours: by appointment Preferred communication: email Phone: |
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School of Education Mission

We ignite learning. We strive for well-being for all. **We teach.** We commit to student, family, and community success. **We commit to educational equity.** We advocate. We work for justice. **We cultivate relationships.** We forge engaged partnerships. **We collaborate.** We learn with and from communities. **We innovate and agitate.** We pursue and produce knowledge. We research. **We disrupt and transform inequitable educational structures.** We approach learning as intertwined with health, wellness, and human development. We address how national, global, social, and technological change impacts learning. **We shape practice and policy.** We teach with and for dignity. We think. We dream. **We lead with integrity.** We are the School of Education at the University of Pittsburgh.

Course Description

TLL 2590 Research Seminar in Special Education is a graduate-level course offered for 3.0 credits. This course focuses on providing students with an understanding of single-subject experimental design and research methodologies in special education and behavior analysis. Topics include measurement of behaviors, conceptual basis and logic of design, experimental control and internal validity, data analysis, and interpretation of results. This is one of the courses required for graduate students seeking board certification in behavior analysis (BCBA).

Course Objectives

As a result of active participation and successful completion of requirements, students will:

1. Understand key concepts in special education research and single-subject design.
2. Identify elements of quality research, including measurement, data collection, and interpretation.
3. Analyze recent studies in special education for single-subject design features.
4. Develop responses to questions on special education research.
5. Engage with researchers specializing in single-subject design research.

5th Edition Task List Items

C. Measurement, Data Display, and Interpretation

Baseline

- C-1 Establish operational definitions of behavior.
- C-2 Distinguish among direct, indirect, and product measures of behavior.
- C-3 Measure occurrence (e.g., count, frequency, rate, percentage).
- C-4 Measure temporal dimensions of behavior (e.g., duration, latency, interresponse time).
- C-5 Measure form and strength of behavior (e.g., topography, magnitude).
- C-6 Measure trials to criterion.
- C-7 Design and implement sampling procedures (i.e., interval recording, time sampling).
- C-8 Evaluate the validity and reliability of measurement procedures.
- C-9 Select a measurement system to obtain representative data given the dimensions of behavior and the logistics of observing and recording.
- C-10 Graph data to communicate relevant quantitative relations (e.g., equal-interval graphs, bar graphs, cumulative records).
- C-11 Interpret graphed data.

D. Experimental Design

- D-1 Distinguish between dependent and independent variables.
- D-2 Distinguish between internal and external validity.
- D-3 Identify the defining features of single-subject experimental designs (e.g., individuals serve as their own controls, repeated measures, prediction, verification, replication).
- D-4 Describe the advantages of single-subject experimental designs compared to group designs.
- D-5 Use single-subject experimental designs (e.g., reversal, multiple baseline, multielement, changing criterion).
- D-6 Describe rationales for conducting comparative, component, and parametric analyses.

Important Course Information

Class Meetings

This course is offered in person on the University of Pittsburgh campus in Oakland. Students should plan to meet with the instructor and their peers on **Mondays from 6:00 – 8:30 PM in WWPH 5400**. Three researchers that conduct single-subject design research will meet with students during the semester via Zoom and in person.

Textbooks

It is *optional* to purchase the following textbooks to participate in this course.

- Students will be provided with access to chapters from this book through Pitt's library system
 - Johnston, J. M., Pennypacker, H. S., & Green, G. (2020). *Strategies and tactics of behavioral research* (4th ed.). Routledge.
- Students may use this book in other courses and can reference this text to support learning and studying.
 - Cooper, J., Heron, T., & Heward, W. (2020). *Applied Behavior Analysis* (3rd Ed.). Pearson Education, Inc. [ISBN-13: 9780134798769]

Communication

The instructor will use Canvas (Learning Management System; LMS) announcements to communicate most frequently with students.

- Tutorial on signing up for announcements: <https://community.canvaslms.com/docs/doc-10624>.
- Please communicate with the instructor through Canvas or via email at jhiggins@pitt.edu.

Office hours

Students may schedule an individual meeting anytime by emailing the instructor. Your instructor is available to meet in person at her office in Oakland or via Zoom web conference.

Participation expectations

Learning is a social process. Attendance will be tracked across five random points during the semester. You are expected to also log onto Canvas as work through content weekly as provided by the instructor. In the event of prolonged absences in which you do not participate in the prior (due to sickness or family emergency), you should contact me via email. Extreme emergencies will be handled on an individual basis.

Due dates

All assignments are due on **Mondays before class at 5:59 PM EST.** Need an extension? Just ask. **Your instructor is happy to provide one!**

Assignment submissions in Canvas

Please make sure your assignments are clearly labeled with your first and last name. When appropriate, save your file with last name followed by the assignment title (e.g., **Higgins_reflection**).

Confidentiality

You are responsible to maintain the confidentiality of all the students you work with in field placements related to your coursework at the University of Pittsburgh. When writing or completing assignments for courses or speaking about your field experience and the students you work with, use **pseudonyms** (not initials) for student, teacher, and school names. In public, it is your responsibility to keep written assignments and any other materials bearing the names of students, teachers, or staff secure from the view of others.

Feedback

For most assignments, the instructor provides group-level summary for the entire class and/or individual feedback rubrics. The instructor analyzes highlights, patterns of strengths, points of improvements and posted as an announcement. Individual written feedback can be requested by a student at any time.

Late assignments or request for extension

Request for late assignments must be cleared ahead of time and for good reason as judged by the instructor. Given instructor permission in advance of due dates, assignments will be accepted within two weeks of due date.

Activities & Assignments

To receive a course letter grade of A-C, all required assignments, projects, and course materials must be completed. The instructor can consider an incomplete only if a substantial portion (50% or more) of the class assignments is completed with a satisfactory grade (A-B) at the time of request. In all other circumstances, students should plan to withdraw from the course.

| | Total Points | % Grade |
|--|--------------|-------------|
| Attendance/Participation | 25 | 10% |
| Quizzes (11 @ 10 Points Each) | 100 | 30% |
| Practice Assignments (5 @ 10 Points Each) | 50 | 20% |
| Reflection of Learning after Researcher Presentation (3 @ 5 Points Each) | 15 | 10% |
| Knowledge Competency Exam (1) | 100 | 30% |
| Total | 300 | 100% |

| Percentage (%) | Letter Grade |
|----------------|--------------|
| 94 - 100 | A |
| 90 - 93 | A- |
| 87 - 89 | B+ |
| 83 - 86 | B |
| 80 - 82 | B- |
| 74 - 79 | C |
| 69 - 73 | D |

Technology Requirements & Support

Students will need the following technology to participate fully in this course.

- Active Pitt email address (if you forward your mail make sure to check regularly)
- Access to Canvas LMS (Learning Management System)
- Internet connection (preferably high -speed broadband wired or wireless)
- Supported Web browser (Google Chrome is strongly recommended)
- Word processor (such as Microsoft Word)
- Adobe Reader (to view PDF files)

Note: The instructor recognizes that not all students may have access to the technology listed above. Please reach out to the instructor to discuss accommodations if needed.

Tech Support

Contact Pitt IT for technical assistance by submitting a ticket to the helpdesk. Students may also contact 412-624-HELP (437) or email helpdesk@pitt.edu.

Course, School, and University Policies

Academic Integrity

Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators.

Disability Services

If you have a disability that requires special testing accommodations or other modifications, you need to notify the instructor and Disability Resources and Services no later than the second week of the term. You may be asked to provide documentation of your disability. To notify Disability Resources and Services, call (412) 648-7890 (Voice or TTD) to schedule an appointment. The Disability Resources and Services office is located in 140 William Pitt Union on the Oakland campus.

TLL Departmental Grievance Procedures

The purpose of grievance procedures is to ensure the rights and responsibilities of faculty and students in their relationships with each other. When a student in DIL believes that a faculty member has not met his or her obligations (as an instructor or in another capacity) as described in the Academic Integrity Guidelines, the student should follow this procedure:

1. The student should talk directly to the faculty member to attempt to resolve the matter.
2. If the matter cannot be resolved at that level, the student should talk to the relevant coordinator.
3. If the matter remains unresolved, the student should talk to the associate chair of TLL.
4. If needed, the student should next talk to the SOE associate dean of students.
5. If the matter still remains unresolved, the student should file a written statement of charges with the dean's designated Academic Integrity Administrative.

Civility Commitment

As future or current educators, we will operate from a standpoint that everyone believes that all students deserve a quality education in a safe setting. The same can be said for university learning. A university classroom is, by definition, space where a free exchange of ideas must happen, but where consideration for others, their views, and their life experiences is also paramount. When you are uncomfortable with an idea, it is your right to speak up about that. As we learn with and about people with very different life experiences and beliefs from our own, it is imperative that we respect these perspectives and use respectful language in discussing and challenging ideas. Carefully consider your language choices to ensure that all learners feel safe and valued. If at any time, you are uncomfortable please feel free to speak out and/or speak to me privately.

Sexual Harassment

The University of Pittsburgh is committed to the maintenance of a community free from all forms of sexual harassment. Sexual harassment violates University policy as well as state, federal, and local laws. It is neither permitted nor condoned. It is also a violation of the University of Pittsburgh's policy against sexual harassment for any employee or student at the University of Pittsburgh to attempt in any way to retaliate against a person who makes a claim of sexual harassment. Any individual who, after thorough investigation and an informal or formal hearing, is found to have violated the University's policy against sexual harassment, will be subject to disciplinary action, including, but not limited to, reprimand, suspension, termination, or expulsion. Any disciplinary action taken will depend upon the severity of the offense. For more information, see the Web site: <https://www.policy.pitt.edu/cs-20-sexual-misconduct-formerly-06-05-01>

Diversity and Inclusion Statement

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Names and Pronouns

I will gladly honor your request to address you by your name and pronoun (that may differ from the school records). Please advise me of this preference early in the term so that I may make appropriate changes to my records. You may email me or tell me in person in class, whichever is most comfortable to you! I want to be sure you feel yourself and comfortable in our class community.

Statement on Classroom Recording

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

Copyright Statement

These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

G-grades

If unforeseen events (such as major illness) prevent a student from timely completion of course work, he/she may request a meeting with the instructor to discuss the possibility of earning a "G" grade for the term. If both student and instructor agree to the "G" grade, they collaboratively write a document that describes, in detail, what the student needs to do to complete the required course work and the time frame (not to exceed one academic year) within which he/she must do so. Upon receiving all work, the course instructor would evaluate the work and send forward to the Associate Dean a request for the permanent grade.

Food/Housing Insecurity

Many students, both undergraduate and graduate, experience housing and/or food insecurity that can impact their academic work and general health. Please know there are resources available to you that are confidential. Of course, you are welcome to speak with me if you need support in contacting the right people/offices. You may also consider exploring the Pitt Pantry or Off-Campus Housing Office.

Cell Phones

Cell phones are to be turned off and put away, unless you have made prior arrangements with me because of a distinct permanent or temporary need (e.g., young children at home; an ailing parent). In such a case, the cell phone should be put on vibrate and you should answer or return the call outside the classroom. Please, no text-messaging while class is in session.

TLL 2590 Research Seminar in Special Education Fall 2024 Course Outline

| DATE | W | TOPIC | READINGS | ASSIGNMENTS |
|------|---|--|---|--|
| 8/26 | 1 | Introductions/ Overview | No readings Review how to access to textbook | Review syllabus |
| 9/2 | 2 | Labor Day No class | | |
| 9/9 | 3 | Research in Special Education and Applied Behavior Analysis | Skinner: A Case History in Scientific Method | Review updated syllabus |
| 9/16 | 4 | The Natural Science of Behavior | JPG – Ch 1 Discovery in Research and Practice JPG – Ch 2 Behavior as a Scientific and Practical Subject Matter JPG – Ch 3 Asking Questions: What Do You Want to Know? | Practice #1 Defining Behavior *complete and submit during class Quiz #1 due 9/30 |

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| 9/23 | 5 | Measuring Behaviors | JPG – Ch 4 Selecting and Defining Target Behaviors JPG – Ch 5 Dimensions of Behavior and Units of Measurement JPG – Ch 6 Observing and Recording | Practice #2 Measuring Behavior* Quiz #2 due 9/30 |
| 9/30 | 6 | Measuring Behaviors (cont.) | JPG – Ch 7 Behavior Analytic Assessment JPG – Ch 8 Evaluating Measurement | Practice #3 Data Collection* Quiz #3 due 10/7 |
| 10/7 | 7 | Overview of Experimental Designs | JPG – Ch 9 Behavioral Variability JPG – Ch 10 Steady States and Transitions | Practice #4 Interobserver Agreement* Quiz 4 due 10/21 Reflection #1 due |
| 10/14 | 8 | Fall Break – use this time to rest and recharge! | | |
| 10/21 | 9 | Experimental Designs | JPG Ch 11 Designing Behavioral Comparisons JPG Ch 12 Single Baseline Designs | Quiz #5 due 10/28 |
| 10/28 | 10 | Experimental Designs (cont.) | JPG Ch 13 Multiple Baseline Designs | Practice #5 Graphing due 11/4 Quiz #7 due 11/4 Reflection #2 due |
| 11/4 | 11 | Graphing Behavioral Data | JPG Ch 14 Graphical Analysis of Behavioral Data Article TBD | Quiz #8 due 11/11 Reflection #3 due |
| 11/11 | 12 | Research and Practical Projects | | Quiz #9 due 11/18 |

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| 11/18 | 13 | Research and Practical Projects (cont.) | JPG Ch 16 Interpreting Research and Practical Projects | Quiz #10 due 11/25 Reflection #4 due |
| 11/25 | 14 | Thanksgiving Break No class | | |
| 12/2 | 15 | Research and Practical Projects (cont.) | JPG Ch 17 Behavior Analysis and Research Ethics | Quiz #11 due 12/2 |
| 12/10 | 16 | No Meeting: Final Exam Online & Reflection #5 due | | |