Special Course: Applied Behavior Analysis and Evidence-Based Interventions in School Psychology
EPSY 798
Fall 2015
Syllabus

Instructor: Christopher R. Niileksela, Ph.D.
Office: JRP 641
Office Phone: 785-864-1037
Office Hours: Mondays 1:00-4:00; Tuesdays 1:00-4:00 or by appt.
E-Mail: chrisn@ku.edu
Meeting Times: Tuesdays 9:30-12:20
Location: 142 Joseph R. Pearson Hall
Course Webpage: http://courseware.ku.edu/

Primary Sources

Secondary Sources
Note: This is an excellent resource, so you may want to consider purchasing it.

Purpose of the Course
This course is designed to advance the student's knowledge of applied behavior analysis, including basic concepts, application of behavioral principles, and more complex topics. Briefly, students will learn the following:

1. Conceptual Foundations
   a. Basic principles of science and behavior
   b. Basic principles of behavior analysis and how they are applied

2. Research Design
   a. How to use within-subjects research design for intervention
   b. Approaches to data collection consistent with a applied behavior analysis
   c. How to implement an intervention program
   d. How to evaluate in an interrupted time series (within-subjects) research design

3. Practical Applications
   a. Practice defining, measuring, and evaluating behavior
   b. Simulated practice of a functional behavior assessments
   c. Review evidence-based interventions in school psychology
   d. Ethical and legal issues related to applied behavior analysis
School of Education & SPSY Program Standards

The primary mission of the School of Education is to prepare leaders in education and human services fields. As stated in the School Code...“Within the University, the School of Education serves Kansas, the nation, and the world by (1) preparing individuals to be leaders and practitioners in education and related human service fields, (2) expanding and deepening understanding of education as a fundamental human endeavor, and (3) helping society define and respond to its educational responsibilities and challenges.” The components that frame this mission for our initial and advanced programs are Research and Best Practice, Content Knowledge, and Professionalism. These interlocking themes build our Conceptual Framework.

This course aligns with the mission of the School of Education because you will be learning basic principles of human behavior, you will be learning how these principles can be applied to educational settings and problems, and you will be learning how to use these tools to help improve the educational experience for students and teachers. This course will help you gain necessary knowledge and skills for evaluating single-subject behavioral research, completing functional behavior assessments, and building effective behavior intervention plans.

Content of this course is related to the following NCATE standards:

**NCATE #2**: The educator demonstrates an understanding of how individuals learn and develop intellectually, socially, and personally and provides learning opportunities that support this development.

**NCATE #3**: The educator demonstrates the ability to provide different approaches to learning and creates instructional opportunities that are equitable, that are based on developmental levels, and that are adapted to diverse learners, including those with exceptionalities.

**NCATE #5**: The educator uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

**NCATE #8**: The educator understands and uses formal and informal assessment strategies to evaluate and ensure the continual intellectual, social, and other aspects of personal development of all learners.

The SPSY program related standards that are related to this course are shown below.

**KSDE Standard #1 [Psychoeducational Assessment]** The school psychologist uses varied models and methods of assessment as part of a systematic process to collect data and other information, translate assessment results into empirically-based decisions about service delivery, and evaluate the outcomes of services.

**NASP Standard II [Data Based Decision Making and Accountability]** – The school psychologist has knowledge of varied methods of assessment and data collection methods for identifying strengths and needs, developing effective services and programs, and measuring progress and outcomes. As part of a systematic and comprehensive process of effective decision...
making and problem solving that permeates all aspects of service delivery, the school psychologist demonstrates skills to use psychological and educational assessment, data collection strategies, and technology resources and applies results to design, implement, and evaluate response to services and programs.

**KSDE Standard #4 [Collaboration for Behavioral Social Emotional Intervention]** The school psychologist, in collaboration with others, develops appropriate behavioral, affective, adaptive, and social goals for students of varying abilities, disabilities, strengths, and needs, implements interventions to achieve those goals, and evaluates the effectiveness of intervention.

**NASP Standard IV (Element 4.2) [Interventions and Mental Health Services to Develop Social and Life Skills]** – The school psychologist has knowledge of biological, cultural, developmental, and social influences on behavior and mental health, behavioral and emotional impacts on learning and life skills, and evidence-based strategies to promote social-emotional functioning and mental health. The school psychologist, in collaboration with others, demonstrates skills to use assessment and data-collection methods and implements and evaluates services that support socialization, learning, and mental health.

**KSDE Standard #6 [Knowledge of Education/Safe Schools]** The school psychologist has knowledge of general education, special education, and other educational and related services and understands schools and other settings as systems. The school psychologist works with individuals and groups to facilitate policies and practices that create and maintain safe, supportive, and effective learning environments for children and others.

**NASP Standard V (Element 5.1) [School-wide Practices to Promote Learning]** – The school psychologist has knowledge of school and systems structure, organization, and theory; general and special education; technology resources; and evidence-based school practices that promote learning and mental health. The school psychologist, in collaboration with others, demonstrates skills to develop and implement practices and strategies to create and maintain effective and supportive learning environments for children and others.

**KSDE Standard #9 [Research]** The school psychologist evaluates research, translates research into practice, and understands research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services.

**NASP Standard VIII (Element 8.1) – [Research and Program Evaluation]** – The school psychologist has knowledge of research design, statistics, measurement, varied data collection and analysis techniques, and program evaluation sufficient for understanding research and interpreting data in applied settings. The school psychologist demonstrates skills to evaluate and apply research as a foundation for service delivery and, in collaboration with others, uses various techniques and technology resources for data collection, measurement, and analysis to support effective practices at the individual, group, and/or systems levels.

**KSDE Standard #10 [History of Psychology, Professional Development and Ethics]** The school psychologist has knowledge of the history and foundations of the profession, of various service models and methods, of public policy development applicable to services to infants, children and families, and of ethical, professional, and legal standards. The school psychologist practices in ways that are consistent with applicable standards, is involved in the profession, and has the knowledge and skills needed to acquire career-long professional development.
NASP Standard VIII (Element 8.2) [Legal, Ethical, and Professional Practice] – The school psychologist has knowledge of the history and foundations of school psychology; multiple models and methods; ethical, legal, and professional standards. The school psychologist demonstrates skills to provide services consistent with ethical, legal, and professional standards; engages in responsive ethical and professional decision-making; collaborates with other professionals; and applies professional work characteristics needed for effective practice as a school psychologist, including respect for human diversity and social injustice, communication skills, effective interpersonal skills, responsibility, adaptability, initiative, dependability, and technology skills.

KSDE Standard #11 [Technology] The school psychologist accesses, evaluates, and utilizes information sources and technology in ways that safeguard or enhance the quality of services.

Classroom Activities and Evaluation

Class Sessions: Class sessions will follow a similar format each week. Each week will probably look slightly different, but this is a general format of the class.

**Part 1** Quiz review (9:30-9:45)
**Part 2** Discussion/Lecture on Readings (9:45-10:45)
**BREAK** (10 minutes)
**Part 3** Discussion/Activity/Practice Applied Skills (10:55-11:50)
**Part 4** EBI Presentations (11:50-12:20)

Requirements

**Weekly Quizzes (10% of grade)**
In order to verify that you understand the major concepts related to the readings, you will be required to complete a short quiz before class each week. You will access this quiz on Blackboard and it must be completed by **12:00pm (noon) on the Monday before class**. The quiz will include between 10-20 questions, and will likely be a mixture of multiple choice questions, true/false questions, and/or short answer questions.

**Discussion Questions (10% of grade)**
Each week, you will be required to turn in **one (1) discussion question** related to the readings. Additionally, you will be required to respond to **two (2)** of the discussion questions that have been posted by your colleagues. These need to be turned in electronically to Blackboard. Your question must be posted by **12:00pm (noon) on the Monday before class** and your responses must be posted by **9:30am on the Tuesday of class (so, before class starts)**. Questions from all students will be compiled and included in the weekly presentation to guide class discussion, and you will be encouraged to talk about your responses to other questions on the discussion board. You will be graded on discussion questions based on several criteria related to content and writing. There is a “How To” for writing discussion questions at the end of the syllabus, and I highly suggest that you follow these guidelines for writing questions.
Evidence-Based Intervention (EBI) Presentations (2 presentations, 10% of grade)
Beginning with the class period on September 9th, the last 30 minutes of most class periods will include presentations from two students on an evidence-based intervention. Students will research, present, and prepare a one-page handout on an evidence-based intervention that can be used for various academic or behavioral problems affecting children, adolescents, or their families. You will be randomly assigned to two different days to present. Ten minutes will be allotted for each presentation. Each presentation and paper should include:

1. Topic or problem addressed
2. Overview of the intervention
3. Materials needed
4. Steps involved in implementing the intervention
5. Methods and tools used to evaluate the effectiveness of the intervention (e.g., if I were using this intervention in the field, what measures would I use to know that it worked for my student?)

The following list of topics may be used for your review. This assignment will provide everyone with approximately 20 intervention summaries that can be used as a reference in the future, so please make the summaries clear and concise, especially the methods and materials that are needed for the intervention. Finally, please choose relevant interventions (e.g., no medical interventions, as you will probably not be prescribing medication as a school psychologist).

**Possible Topics**
- Autism Spectrum Disorder
- Bipolar Disorder
- Eating Disorders
- Math Calculation
- Math Reasoning or Problem Solving
- Spelling
- Writing
- Reading Comprehension
- Decoding
- Word Identification
- Anxiety
- ADHD
- Homework Completion
- Academic Productivity
- Disruptive/Oppositional Behavior
- Social Skills
- Depression/Dysthymia
- Classroom Management
- Language Development (preschool)
- Bullying

Possible sources for the EBI Presentations include:

2. *Journal of Applied Behavior Analysis*
3. *Journal of Behavioral Education*
4. *Journal of Learning Disabilities*
5. Report of the Children’s Evidence Based Practices Expert Panel on Course website
7. Cochrane Reviews online at [http://www.cochrane.org/](http://www.cochrane.org/)
Practical Applications of Functional Behavior Assessment (10% of grade)
We will be working with the EPSY 455 class (a classroom management course for student teachers) to conduct a practice functional behavior assessment. I am still working with the instructor of this course to plan exactly what we will be doing, but this will provide you with some practical experience talking to student teachers to define a behavior, plan a data collection strategy, work to understand the antecedents, consequences, and possible functions of the behavior, and develop some preliminary interventions for the student. This will likely involve a time that is outside of our normal class meeting. More information on this project will be available later in the semester.

Research Article Review (10% of grade)
A major part of this course is learning how to design and evaluate research in applied behavior analysis. On the last day of class, each student will present an article review. More information will be provided on this assignment, but you will be required to find an article that uses a single-subject design and provide a critical look at the research, including the experimental design, data collection and reliability, the data analysis, the interpretation of the data and results, and the conclusions made by the author(s). Your article should be approved by me before you start to work on this. Although this may seem like a short assignment, this project requires you to have a very strong understanding of the article and methodology used in the study. This is something you will want to start thinking about early on!

Midterm and Final Exams (50% of grade)
The midterm exam will be an in-class test that will cover the material from the first half of the class. This test will be a combination of multiple choice and short answer questions. The final exam will be administered during final exam week and be cumulative over all course content. These will be in-class exams that consist of multiple choice questions a two or three short answer questions.

Grading
The grades will be assigned as follows. A final grade below a B in this course (yes, a B- is below a B) will require a retake of the course. The final points will be adjusted for any changes in the number of assignments, the number of points assignments are worth, etc. You will be informed as soon as possible about any changes in grading.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>% of Grade</th>
<th>Number of Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Questions</td>
<td>10%</td>
<td>100 (~8.34 points each)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
<td>100 (8-10 points each)</td>
</tr>
<tr>
<td>EBI Presentations (2)</td>
<td>10%</td>
<td>100 (50 points each)</td>
</tr>
<tr>
<td>Practical Experience</td>
<td>10%</td>
<td>100</td>
</tr>
<tr>
<td>Article Review</td>
<td>10%</td>
<td>100</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
<td>250</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
<td>250</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>
Final Course Grades will be assigned as follows:

- A = 93.0 or greater  
- A- = 90.00-92.99  
- B+ = 87.00-89.99  
- B = 83.00-86.99  
- B- = 80.00-82.99  
- C+ = 77.00-79.99  
- C = < 77.50

A grade of B or better is required to adequately pass the course per the School Psychology program and KU graduate school.

**Note to Students with Disabilities**
The Academic Achievement and Access Center (AAAC) coordinates academic accommodations and services for all eligible KU students with disabilities. If you have a disability for which you wish to request accommodations and have not contacted the AAAC, please do so as soon as possible. They are located in 22 Strong Hall and can be reached at 785-864-4064 (V/TTY). Information about their services can be found at [http://www.disability.ku.edu](http://www.disability.ku.edu). Please contact me privately in regard to your needs in this course.

**Late Work and Academic Integrity**
All work for this course should be turned in on time. Any late discussion questions, assignments, presentations, quizzes will have 10% of the grade taken off for every day that they are late. Preparing for and attending class is very important to successfully complete this course. Missing class for minor reasons is **not** recommended. If there is a family emergency or other reason that requires you to miss class, please contact me as soon as possible so we can work out how to make up any points or the review content from the time you missed.

*Words from KU on academic integrity:*
“Academic integrity is a central value in higher education. It rests on two principles: first, that academic work is represented truthfully as to its source and its accuracy, and second, that academic results are obtained by fair and authorized means. "Academic misconduct" occurs when these values are not respected. Academic misconduct at KU is defined in the University Senate Rules and Regulations. [www.governance.ku.edu/usrr.html#art2sect6](http://www.governance.ku.edu/usrr.html#art2sect6). A good rule of thumb is ‘if you have to ask if this is cheating, it probably is.’”

The issue academic integrity and especially of digital plagiarism has raised concerns about ethics, student writing experiences, and academic integrity. KU subscribes to a digital plagiarism detection program called Turnititin.com, which may be used to check papers submitted in this course. You may be asked to submit your papers in a digital format (e-mail attachment, BlackBoard™ digital drop box) so that your paper can be checked against web pages and databases of existing papers. Although you may never have engaged in intentional plagiarism, many students do incorporate sources without citations; this program can alert me to this if it is present. For further information on academic integrity at KU please review this website [http://www.vpss.ku.edu/academic.shtml](http://www.vpss.ku.edu/academic.shtml).
**Course Calendar (tentative):** Changes may be made to the syllabus and course calendar during the semester depending on time required for certain topics. Some readings may be added later in the semester if they would be helpful for you. If this happens every effort will be made to let you know as soon as possible so you can plan accordingly.

<table>
<thead>
<tr>
<th>Week: Date</th>
<th>Topics</th>
<th>Required Readings</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1: 08/25/15</td>
<td>Syllabus, Overview of Class</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Week 2: 09/01/15</td>
<td>Basic Concepts in ABA</td>
<td>A&amp;T Chapters 1 &amp; 2; Baer, Wolf, &amp; Risley (1968)</td>
<td>Quiz; DQs</td>
</tr>
<tr>
<td>Week 3: 09/08/15</td>
<td>Defining Behavior and Writing Behavioral Objectives Intro to EBIs</td>
<td>A&amp;T Chapter 3; Rathvon Ch. 1</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 4: 09/15/15</td>
<td>Data Collection in ABA Reliability</td>
<td>A&amp;T Chapter 4; Kazdin (1979)</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 5: 09/22/15</td>
<td>Graphing Data Analyzing Behavior Change</td>
<td>A&amp;T Chapter 5; Todd (n.d.); (extra reading FYI Dixon et al. [2009])</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 6: 09/29/15</td>
<td>ABA Research Design I</td>
<td>A&amp;T Chapter 6 (pp. 124-143)</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 7: 10/06/15</td>
<td>ABA Research Design II Social Validity</td>
<td>A&amp;T Chapter 6 (pp. 144-170); Wolf (1978)</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 8: 10/13/15</td>
<td>FALL BREAK</td>
<td>Something else</td>
<td>Watch a movie</td>
</tr>
<tr>
<td>Week 9: 10/20/15</td>
<td>Midterm Exam (1st half of class) FBA Week I (Indirect Methods)</td>
<td>S&amp;W Chapters 1, 4, &amp; 7 (read 5 &amp; 6 for review) Langthorne &amp; McGill (2009)</td>
<td>None</td>
</tr>
<tr>
<td>Week 10: 10/27/15</td>
<td>FBA Week II (Motivating Operations; Direct Methods)</td>
<td>S&amp;W Chapters 8-10; Scott, Alter, &amp; McQuillan (2010)</td>
<td>Quiz; DQs</td>
</tr>
<tr>
<td>Week 11: 11/03/15</td>
<td>FBA Week III (Using FBA Results)</td>
<td>S&amp;W Chapter 11; A&amp;T Chapter 7</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 12: 11/10/15</td>
<td>Increasing/Developing Behavior</td>
<td>A&amp;T Chapter 8</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 13: 11/17/15</td>
<td>Decreasing Behavior</td>
<td>A&amp;T Chapter 9</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 14: 11/24/15</td>
<td>Differential Reinforcement</td>
<td>A&amp;T Chapter 10</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 15: 12/01/15</td>
<td>Generalization, Self-Management, Putting it together</td>
<td>A&amp;T Chapters 11-13</td>
<td>Quiz; DQs; EBIs</td>
</tr>
<tr>
<td>Week 16: 12/08/15</td>
<td>Article Review Presentations</td>
<td>None</td>
<td>Article Review</td>
</tr>
<tr>
<td>Finals Week</td>
<td>Final Exam</td>
<td>All of Them</td>
<td>None</td>
</tr>
</tbody>
</table>
References for Readings


A “How to” for writing discussion questions (adapted from Greg Madden):

Five Don’ts

1. **Don’t** write a question from a point that was only made on the first page of the paper or chapter, it will look like you did not read the entire chapter/article. If you actually do have a question about something written on the first page, make sure that it is substantive.

2. **Don’t** ask questions like, “What has been published since this paper was published?” or “Do you think that gender affected the results of the intervention?” You can find out what has else has been done on a topic by searching the literature. Questions about variables not included in a study are best answered with further research, not class discussion.

3. **Don’t** ask questions about factual information that can be easily answered from the chapter or article (e.g., “What research design was used?”) or questions that can be answered with a simple “yes” or “no” (e.g., “Does reinforcement increase behavior?”).

4. **Don’t** submit 1-sentence questions. There is probably not enough information.

5. **Don’t** write an entire paragraph restating the findings of a study or the entire theoretical background of a concept. The class also read the material and should know enough about it that you can be more specific information about what you are interested in discussing.

Five Do’s

6. **Do** use a spell- and grammar-check program before submitting questions. Spelling and grammar errors can be easily avoided by checking using these programs (though many grammar errors will not be picked up by Microsoft Word).

7. **Do** ask questions that will promote discussion amongst the group. Your question should make the reader think about and evaluate the concept, study, etc.

8. **Do** ask questions that are specific and concrete. Once you have stated you basic idea/question, tell us why you have this question. Is there some data in the article that led you to your idea/question? If so, tell us about it in concrete terms.

9. **Do** ask one question in each discussion question. It can be easy to ask several questions that are related, but may have different answers. Again, try to be specific.

10. **Do** ask questions about concepts or topics you do not fully understand. Even if you feel that others seem to understand the concept (are you sure they understand it and you don’t?), it is better to continue discussion until everyone. Also, reviewing a concept or talking about a complex topic in a different way can be beneficial for everyone.

Example Discussion Question

When explaining alternating treatments design (ATD), Hayes et al. (1999) mention that collecting baseline data is not necessary, although it is desirable. Collecting baseline data provides a description of current functioning and a prediction of the future course of behavior, but the collection of baseline data in an ATD did not seem like a priority to the authors. If treatments are being compared to one another, one reason to collect baseline data is to determine whether or not a treatment is detrimental. Without collecting baseline data, a treatment could be implemented that actually makes the problem worse and the treatment could be continued without the therapist knowing that it has been detrimental. Do you think this reason is enough to always collect some sort of baseline data?