Course Time: Monday 6:00pm – 9:00pm
Course Location:

Instructor Information
Professor: Mark Dixon, Ph.D., BCBA-D
Email: mdixon@siu.edu
Office Location: 336A Rehn Hall
Office Hours: M 8:30am – 1:00 pm/by appointment

TA: Rachel Enoch,
Email: rachelenoch@siu.edu
Office Location: 336 Rehn Hall
Office Hours: Monday 3-5/by appointment

Course Materials
Readings for this class will consist of chapters from the primary text and from assigned research articles. Students are expected to have read all assigned readings prior to the specified class.

Books for Target 1: Chapters (not articles) will be e-mailed out.

Books for Target 2: Behavior of Organisms by B.F. Skinner

Books for Target 3: Nudge by Thaler and Sunstein

Books for Target 4: Relational Frame Theory: A Post-Skinnerian Account of Human Language and Cognition by Barnes-Holmes and Roche

Books for Target 5: Science of Psychology by Kantor and Smith

• Assigned research articles will be assigned for EACH target along with the assigned books. These articles can be accessed online, from the specific journal website. Find them!

Computer Usage
A fair amount of work in this class will require you to use a computer. There are a numerous PCs in the labs on campus, at the library, and my research lab has a dedicated PC desktop for development of your computer software, if needed. Make sure if you plan on using community computers (my lab, computers on campus), that you plan FAR FAR ahead of the due dates for the assignment. The class TA will ensure you have access to the computer in my lab, but will NOT help with troubleshooting or programming of any experiment. All lab computer usage must be arranged a minimum of three days prior to the date you want to use the computer.

Course Description
The objective of this course is to provide an in-depth examination of the complex nature of the field of behavior analysis. We will explore the history, the conceptual foundations, experimental analyses, and practical implementation of a post-contingency driven field. We will also explore the development of behavioral solutions using the computer interface. The course will be taught through a combination of lecture, assigned readings, class discussion, group projects, exams, and essays. This class will be broken into 5 Targets, which will be outlined below.

Grades
Your grade will be calculated based on points earned from 12 quizzes, class participation, essays/papers, group projects, and a final exam. Your grade will be made up by the following breakdown: Approximately 40% weekly quizzes, 40% Target Projects (including all components), 20% Final Exam.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Quizzes (13 @ 15pts each)</td>
<td>195pts</td>
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<tr>
<td>Group Presentations (5 @ 6 points)</td>
<td>30 pts.</td>
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<tr>
<td>Brief Reports (3 @ 25 points)</td>
<td>75 pts.</td>
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<tr>
<td>Research Paper (2 @ 50 points)</td>
<td>100 pts.</td>
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<tr>
<td>Final Exam (1 @ 100 points)</td>
<td>100 pts.</td>
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Grade distribution will be as follows:
A: 450pts or above  
B: 400-449pts  
C, D, F: 399 pts.. or below is a failing grade

Total: 500pts

Student Centered Learning Activities (Targets)
The purpose of these activities is to require you to actually interact and apply the principles of behavior analysis to achieve a goal. Each student will be assigned a group and given a target goal. You will need to interact with each other, the teaching assistant, and the instructor on HOW you will solve the goal. There will be minimal guidance in terms of the process to solve the Project, only a clear description of the outcome of the project.
You will read a series of abstracts below. This should be your end result of each activity. You must carry out the necessary steps to achieve the results. You will be required to present each activity the class and will be graded on your approximation to the target results, your creative solution to achieve the results, and your presentation delivery. These activities will account for 40% of your final grade. No deadlines for completion will be moved. No matter what the circumstances are.

Target 1: Development of a computerized slot machine that contains a bonus round feature which includes a mini-game embedded within it

Abstract: The present study explored the preference for a computerized slot machine simulation, which incorporated a bonus-round feature. The concurrent chain schedule of reinforcement held overall session reinforcement rate constant, while trial-by-trial win density varied across the two response options. Using a single group of 10 college undergraduates, we assessed preference for each response option. Results suggest that when given the option of mini-game embedded slot machines that X number of participants preferred this game to the non-mini-game machine, even when reinforcer rates were held constant.

Target 2: Development of a negative reinforcement procedure to reliably produce 5 point maze run times of less than 1 min in 3 cockroaches

Abstract: The present study describes an operant conditioning paradigm, which produced, less than 1 min, 5-point maze completion times in the African Cockroach. Six cockroaches were randomly assigned to either a treatment or control condition and evaluated their performance in a 5-point maze. After initial baseline performances were obtained, the treatment group was exposed to a negative reinforcement paradigm that consisted of X to facilitate the learning of the maze with minimal errors. After successful training, the treatment group was able to produce run times of less than 1 min, while the control group demonstrated considerably poorer performances.

Target 3: Produce discounting curves for 10 high school pathological gamblers and 10 control subjects

Abstract: The present study sought to discover the differences in discounting of high school students that may be suffering from pathological gambling and a matched control group. 20 students completed a series of questions about hypothetical amounts of money that were either available immediately or after a delay. When comparing AUC and hyperbolic functions of the two groups, it appears that those students indicating they may be suffering from pathological gambling, had greater discounting than the control group. An additional relationship was discovered between discounting and ADHD.

Target 4: Teach 10 multi-language words to 4 English only speakers via Relational Frame Theory, and have subsets of those words be used to transform the performance on a novel task.

Abstract: The present study created a series of relational networks for 4 adults, resulting in the acquisition of 5 German, French, Icelandic, and Mandarin words that allowed for the transformation of stimulus functions to a performance-based task. Using Visual Basic, each participant was first evaluated on his or her ability to XXX. Afterwards, a series of conditional discriminations and class mergers allowed for the development of the complex multi-language stimulus class. Finally, a transformation task was implemented to determine the ability for such words to impact behavior.

Target 5: Evaluate the impact of a 30 min ACT session/control session on a group of children under the age of 10.

Abstract: The purpose of the present study was to examine psychological flexibility of young children and how this metric may be impacted by a 30min ACT session, led by a group of graduate students. Six children under the age of 10 were exposed to a short ACT session, which discussed each component of the hexaflex in kid-friendly language, and a control group of six other children were exposed to a control task. Results indicate that psychological flexibility can be impacted through brief interventions, if those interventions are carefully designed and delivered with integrity.

The Breakdown:

**Targets:**
Each of the target’s abstracts is listed above. These are non-negotiable. You must use the provided abstract to guide your research project, no exceptions. You will be divided into groups to work on your group projects, all research projects, presentations, and research papers should be completed equally as a group. For the first target, your group will be randomly selected for you, future target groups are up to the discretion of the instructor and will be announced in class. You are responsible for executing your research projects, on your own. Instructor/TA will not tell you how to implement/execute/complete the project, this a learning opportunity for you to directly apply what you have been taught in lectures and read in the assigned articles/books.

**Presentation:**
Each group will be responsible for delivering a 10-minute MAX presentation. At 10 minutes, your group will be cut-off. This will be done so everyone has a fair amount of time to deliver their presentation. You will need to follow the APA guidelines for presentations. You must also have video clips/documentation as part of your presentation. This must include videos of sessions, collecting data, implementing the project, etc. It must demonstrate clearly that you executed the project as indicated in your paper. Your group will deliver one presentation for each target.

**Performance Evaluations**
On the due date of each Target, you will complete a 3-point ranking system that will evaluate the performance of your group members. This is your opportunity to express/evaluate how you feel your group members executed/performed the components of the assignment.

**How it works:**
Each group member will anonymously rank each of their group members based on the following criteria: The group member’s actual participation and the member’s contribution to the end target. You will be asked to list all other group member names and then rank them as follows:
1=poor/unacceptable
2=sufficient
3=outstanding level of performance
As stated previously, you (as the reporter) will not put your name on your ranking sheet, these must be done anonymously. **If any student receives more than two scores of 1 (poor/unacceptable) from their group mates, they will automatically receive a zero for the target.**

**Reports/Brief Reports:**
For targets 2 and 4 a full report is required. You will write this report as a research paper and as a group.

- Report guidelines:
  - 15-page minimum, not including references.
  - You must follow APA formatting guidelines for APA papers and include all required components
  - Your work must be original; plagiarism will not be tolerated on any account (you also are not allowed to plagiarize yourself, each paper you turn in must be original, this is easy to detect so please have integrity when writing your papers).
  - You must turn in your raw data with your project

For targets 1, 3, and 5 you will write a **brief report**. You will write this report as a JABA brief report and as a group.

- Report guidelines:
  - Must follow JABA Brief Report Guidelines
  - You must follow APA formatting
  - Your work must be original; plagiarism will not be tolerated on any account (you also are not allowed to plagiarize yourself, each paper you turn in must be original, this is easy to detect so please have integrity when writing your papers).
  - You must turn in your raw data with your project

**Quizzes**
Quizzes will be presented at the beginning of each class. Quizzes will consist of essay questions on the materials covered during the prior class lecture and from the assigned readings you should have completed upon the start of class. **No makeup quizzes will be provided so plan accordingly.** You will have 30 minutes to complete each weekly quiz, they will start promptly at 6:00 pm.

**Participation**
Participation is highly encouraged, as that is how you learn, begin to relate, and better understand the material.

**FINAL EXAM**
A comprehensive multiple-choice final exam will be given. This will be administered during finals week on Monday, May 5 from 5:50-7:50 pm, which is also noted on the SIU website. There are no exceptions to this time, please plan to be at class for the university scheduled final time. Please refer to the SIU website if you have further inquiries regarding final exam times.

**Students with Disabilities**
Students with disabilities must contact the University’s Disability Support Services at the beginning of the semester to inform them of the disability and obtain information about services that can facilitate learning. Please stop by their office in Woody Hall, or refer to the DSS website for further information: [http://disabilityservices.siuc.edu](http://disabilityservices.siuc.edu).

**Academic Dishonesty**
You are responsible for making yourself aware of understanding the policies and procedures in the University Catalog that pertain to Academic Integrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If I have evidence of any form of academic dishonesty, I will charge the student with violating the Academic Honesty Policy of the University in a report to the Office of Student Judicial Affairs.

**Class Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Assigned Readings</th>
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<tbody>
<tr>
<td>13-Jan</td>
<td>Target 1</td>
<td>Week 1 Readings</td>
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<tr>
<td>20-Jan</td>
<td>HOLIDAY – NO CLASS</td>
<td>Week 2 Readings</td>
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<tr>
<td>27-Jan</td>
<td>Target 2</td>
<td>Target 1 DUE</td>
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<tr>
<td></td>
<td>QUIZ 1</td>
<td>Behavior of Organisms</td>
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<tr>
<td>3-Feb</td>
<td>Target 2</td>
<td>Week 3 Readings</td>
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<td>Skinner 1969</td>
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<td></td>
<td>QUIZ 2</td>
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<tr>
<td>10-Feb</td>
<td>Target 2</td>
<td>Week 4 Readings</td>
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<tr>
<td></td>
<td>QUIZ 3</td>
<td></td>
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<tr>
<td>17-Feb</td>
<td>Target 3</td>
<td>Target 2 DUE</td>
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<tr>
<td></td>
<td>QUIZ 4</td>
<td>NUDGE</td>
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<tr>
<td>24-Feb</td>
<td>Target 3</td>
<td>Week 5 Readings</td>
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<td>QUIZ 5</td>
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<tr>
<td>3-Mar</td>
<td>Target 3</td>
<td>Week 6 Readings</td>
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<td>QUIZ 6</td>
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<tr>
<td>10-Mar</td>
<td>SPRING BREAK – NO CLASS</td>
<td>No Assigned Readings</td>
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<tr>
<td>17-Mar</td>
<td>Target 4</td>
<td>Target 3 DUE</td>
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<td></td>
<td>QUIZ 7</td>
<td>Relational Frame Theory</td>
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<td>(book)</td>
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<tr>
<td>24-Mar</td>
<td>Target 4</td>
<td>Week 7 Readings</td>
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## READINGS

### Target 1 Readings:

#### Week 1

Chapters 1-4 in the *Handbook of Research Methods* (will be e-mailed out)


#### Week 2


### Target 2 Readings:

#### Week 3


### Target 3 Readings:

#### Week 4


**Target 3 Readings:**

**Week 5**

Behavioral economics. [Jeab]
**Author(s):** Hursh, S. R.
**Year:** 1984  **Volume:** 42  **Pages:** 435-452

Economics, ecologies, and mechanics: The dynamics of responding under conditions of varying motivation. [Jeab]
**Author(s):** P. R. Killeen
**Year:** 1995  **Volume:** 64  **Pages:** 405-431

Behavioral economics without anomalies. [Jeab]
**Author(s):** Rachlin, H.
**Year:** 1995  **Volume:** 64  **Pages:** 397-404


**Week 6**


**Target 4 Readings:**

**Week 7**


**Week 8**

Data in search of a principle: A review of Relational frame theory: A post-Skinnerian account of human language and cognition. [Jeab]
**Author(s):** Palmer, D. C.
**Year:** 2004  **Volume:** 81  **Pages:** 189-204

Cross-domain analogies as relating derived relations among two separate relational networks
Author(s): Ruiz, F.J. & Luciano, C.
Year: 2011 Volume: 95 Pages: 369-385

The transformation of consequential functions in accordance with the relational frames of same and opposite. [Jeab]
Author(s): Whelan, R. & Barnes-Holmes, D.
Year: 2004 Volume: 82 Pages: 177-195


Target 5 Readings:

Week 9


Week 10

Acceptance and commitment therapy: Altering the verbal support for experiential avoidance
SC Hayes, KG Wilson- The Behavior Analyst, 1994

A controlled evaluation of acceptance and commitment therapy plus habit reversal for trichotillomania
DW Woods, CT Wetterneck, CA Flessner- Research and Therapy, 2006

Increasing willingness to experience obsessions: Acceptance and commitment therapy as a treatment for obsessive-compulsive disorder
MP Twohig, SC Hayes, A Masuda- Behavior Therapy, 2006

Acceptance and commitment therapy for generalized social anxiety disorder
KL Dalrymple, JD Herbert - Behavior Modification, 2007