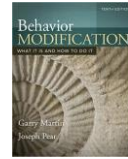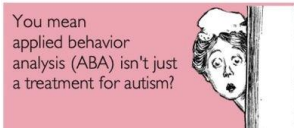**PSYC 411: Applied Behavior Analysis**
Course Syllabus

Textbook and Required Materials:
Martin, G., & Pear, J. (2015). *Behavior modification: What it is and how to do it (10th edition).* Pearson.
ISBN-13: 978-0-205-99211-9
Please identify that you are enrolled in this course and the course is listed in your Blackboard courses.

Course Description and Objectives and Learning Outcomes: Behavior modification, or Applied Behavior Analysis (ABA), applies the basic principle of learning (primarily operant conditioning) to socially meaningful problems. The basic premise of ABA is that our behavior is influenced by consequences. Therefore, to change behavior, one must focus on changing consequences. In the first unit, we will talk about basic behavioral principles. Then, in the second and third units, we will focus on applying those principles to a variety of socially meaningful problems including the assessment and treatment of severe problem behavior displayed by individuals with autism, drug abuse and dependence, organizational/work place behavior, and skill acquisition in schools. By the end of this semester, you will be able to

1. Speak and write in a way that is consistent with a behavioral approach. Namely, this means that you will avoid superfluous language and focus on observable events. You will practice speaking in a behavioral way through class discussions. Your writing will be evaluated through article reviews and the intervention paper. There will be many opportunities to improve and scaffold your writing. As such, this class is designated as a writing intensive course, and writing is a primary focus of the class.
2. Identify key features and concepts of ABA. This will be assessed through weekly reading quizzes and through article reviews and the intervention paper.
3. Critically analyze empirical research related to behavior analysis. In particular, you will become familiar with in single-subject design methodology, and be able to evaluate research using single subject design. We will spend a substantial portion of class discussions building this skill, and you will be evaluated on your knowledge in two article reviews.
4. Apply the principles of ABA to address a behavioral problem. This will be assessed through your intervention paper, in which you will choose a behavior to modify (increase or decrease), develop a protocol to change the behavior of interest, and write up your expected results.

Class Format: The class will consist of lectures and discussions. Class attendance and participation is mandatory. You will read empirical (primary source) journal articles and be expected to synthesize and compare the articles in a structured discussion format. There will be 3 exams and written assignments in this course.

Classroom courtesy. Class attendance is encouraged, and students who attend class typically do better than those who don't attend. **Please turn cell phones off before I begin my lecture. You may not use laptops during class.**

UMBC Degree Requirement Information
Prerequisite: PSYC210 AND (PSYC311 or PSYC332)
How does this course fulfill UMBC requirements for the Bachelor's degree?
   a) Functional competencies covered: (a) scientific and quantitative reasoning, (b) critical analysis and reasoning, (c) technology competency (primarily through the use of Blackboard), and (d) information literacy
   b) Credits: Contributes 3 credits towards the 120 total credits and 45 upper level credits needed for the Bachelor's degree
How does this course fulfill Psychology Major/Minor requirements?
   a) BA degree: Fulfills 400-level elective
   b) BS degree: Fulfills 400-level elective
   c) Psychology Minor: Fulfills 400-level elective

COURSE REQUIREMENTS

EXAMS *(150 points)*

There will be three in-class exams. Exams will consist of multiple choice, true/false, and short essay questions. Exam content will come from both lectures and assigned readings. Questions will involve recall of definitions and study details as well as applications and implications of class material. Learning objective will be provided for each lecture. Each exam will be worth 50 points. Exam 3 is not technically cumulative in that it will not test you on learning objectives from the first or second unit directly; however, material will build over the course of the class and understanding of Unit 1 and 2 materials are necessary to comprehend Unit 3. You will have one hour to complete the exam. We will have lecture following the exam. Lecture following an exam will begin 1 hour and 15 min after the start of the class.

Exam make-up policy. If you need to miss an exam and you know in advance, you must contact me at least a week in advance (or as soon as you know). Documentation will be necessary. If you do not know in advance that you will need to miss an exam, make-up exams will be given in extreme circumstances (e.g., medical emergency).

READING QUIZZES *(60 points)*

For most lectures, there will be a reading quiz (see course schedule for dates). Reading quizzes consist of multiple choice, true/false, and short-answer questions about the weekly assigned readings. Questions will come from provided learning objectives. Quizzes will be taken in class at the start of each class. Quizzes will end 15 min after class begins. If you are late, you will not be permitted extra time to take the quiz. There are a total of 11 quizzes, and each quiz is worth 6 points. The lowest quiz score will be dropped; as such, there will be no make-up quizzes.

ARTICLE REVIEWS *(50 points)*

You will complete two article reviews. An article review focuses on conceptual, procedural, and interpretative limitations of an empirical research study. Your article review will focus on notable strengths, limitations, and ways to address the limitations/do the study better. Article reviews should 2-3 pages (500-750 words). Everyone will do the same article for the first article review (Hanley et al. [2007]). You will have options (denoted by ** on the course schedule) of which article to write about for the second review. Your second article review is due the day the chosen reading is assigned. Each review is worth 25 points. You will lose 5 points for the first day late and 10% (2.5 points) for each day after. Articles will be chosen in the first few weeks of class. Rubrics and detail instructions for both reviews are at the end of this document.

INTERVENTION PROPOSAL PAPER (100 points)

Topic (0 points). You will identify a behavior of another person, animal, or group that you would like to change (increase or decrease). I must approve your topic IN ADVANCE (due date is listed in course schedule for topic). Your topic submission should include an operational definition of the behavior you wish to change, who's behavior it is, how you will collect data on the behavior, and a general idea of how you might change it. Note: although this is not worth any points, you will not receive ANY credit for your final paper if your topic is not approved.

Intervention Proposal Paper (80 points). You will create a written (in APA style) proposal to address your topic using intervention techniques learned in this class. The proposal should be 8-10 pages (2000-2500 words), not including title page, references, or figures. A required rough draft is due by the date listed on the course schedule. The draft will be ungraded and it is highly recommended that you incorporate any feedback in your final paper. Please use the writing center for any review of formal writing. The paper is worth 80 points. Due dates are listed on the course schedule. You will lose 10% (8 points) for each day late. In addition, you must turn in the proposal in order to pass the course. In other words, if you do not turn in the proposal paper, you will automatically receive a grade of "F." Detailed instructions and rubric are at the end of this document. The basic structure/content of the paper is as follows:

Section	Content to be included	Expected Pages
Introduction	Importance of changing the behavior of interest Rationale for the chosen intervention Brief review of research relevant to your topic/problem/intervention (at least 3 empirical studies)	2-3
Method	Planned participant(s) and setting Measurement system Operational definitions Intervention procedure *Note: this is a proposal, so this will all be in future tense.	3-4
Results/Discussion	Summary of *expected* results Figure (graph) of expected results per guidelines covered in class Implications of expected results	3

Limitations and future directions

Peer Review Sessions (20 points). You will have two opportunities for peer review of your proposal throughout the semester. During these sessions, we will break the class into small groups (2-3 students). Each student will present his or her topic and intervention plan to the group. It is required that you bring an outline (a physical document) of your planned project. The group will provide feedback and suggestions. Students will earn up to 10 points per session in the peer review process (5 points for the outline and 5 points for active peer review participation). Active participation is defined as making as least two substantive comments about another person's intervention proposal during the review session on an evaluation form (form at the end of this document). These participation points will be counted separately from general attendance and participation points.

ATTENDANCE AND PARTICIPATION *(40 points)*

Lecture attendance is required. In addition, active participation is required. There are 15 class meetings. Each meeting will be worth 3 points. You will earn 1 point for attendance and 1 point each for two substantive comments made during in-class discussion. That is, to earn full credit, you must attend class and contribute meaningfully to the class discussion at least twice. Comments should be related to course and reading content. In total, this adds up to 45 points. Points will be capped at 40. In other words, you can miss one class without penalty. For this reason, I will not excuse you from class. If you have a situation in which you have to miss more than one class and all absences are excused (with documentation) per university guidelines, you must schedule an in-person meeting with me to determine a solution.

GRADES

You can earn up to 400 points in this course: 150 points from exams, 60 from reading quizzes, 50 from article critiques, 100 from the intervention paper, and 40 points from participation[1]. Your grade will be based on percentages based on 400 possible points.

Note: I will not round your grade! These grade contingencies are summarized in the following table:

Between	*And*	*Percentage*	*Letter Grade*
360	400	90% - 100%	A
320	359	80% - 90%	B
280	319	70% - 80%	C
240	279	60% - 70%	D
0	239	<60%	F

Bonus Points. Students in this class can earn <u>up to</u> 10 bonus points in this course. Bonus points will be added to the point total. **To be absolutely clear:** If you have earned 9 bonus points in the class, and I announce *another* bonus point opportunity that is worth 3 points—you will be credited with 10 bonus points **not 12** if you elect to complete the bonus point opportunity. **Ten** is the maximum number of bonus points permitted in this class.

Resources. Students having trouble should consult me early; if you come to me with problems only after the course is more than half over, it may be too late.

Learning Resources Center (www.umbc.edu/lrc). FREE assistance with written assignments, study skills improvement and other topics to enhance academic success

FAQs about Psychology at UMBC An on-line self-paced opportunity to learn about getting involved in Psychology research at UMBC; concentrations in Biopsychology, Human Services, and Developmental Psychology; career opportunities with a Psychology major/minor; graduate study in Psychology; and many other relevant topics for students interested Psychology. To access, type "psychology" into the Organization Search feature on Blackboard, hit Go, select PSYC_tutorial, and self-enroll.

Students with disabilities. UMBC is committed to eliminating discriminatory obstacles that disadvantage students based on disability. Student Disability Services (SDS) is the UMBC department designated to receive and maintain confidential files of disability-related documentation, certify eligibility for services, determine reasonable accommodations, develop with each student plans for the provision of such accommodations, and serve as a liaison between faculty members and students regarding disability-related issues. If you have a disability and want to request accommodations, contact SDS in the Math/Psych Bldg., room 213 or at 410-455-2459. SDS will require you to provide appropriate documentation of a disability. If you require accommodations for this class, make sure you have notified me.

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[1] Very important! You know what assignments contribute to your final grade. **You** are responsible for keeping a count of these points. The scores that appear on BB will reflect *all* of your behavior (e.g., all reading quiz scores including those that will be dropped). As such, this is **not** a reflection of the total points that will contribute to your final grade. **You** are responsible for keeping track of your point total.

BLACKBOARD

Most course information, including the full syllabus, is available at the course website at http://blackboard.umbc.edu/. If you wish to print material from the site, you may find it easier using GoogleChrome than other internet browsers. **Make sure you are enrolled in blackboard**. Do this immediately. If you miss an assignment due date because you were not enrolled on Blackboard, you **will not** be given an extension. **Note: This applies to students adding the course after the first day of class as well (no extensions, period).** Here are some things you'll find there:

Announcements: When you first enter the class website, you'll always start at the Announcements page. Any class announcements of general interest will be posted here.

Notifications: On the homepage under the "To Do" box, you can set-up when you receive notifications (click "Edit notification settings"). You can get notifications when an assignment is due (via email or text). I strongly recommend that you put all essential dates (see the course schedule) into a notebook planner or electronic calendar (e.g., iCal) or use this notification function. Refer to your course schedule. You are responsible for knowing these dates.

Syllabus: If you lose this syllabus, you can download a replacement copy. Also, if there are any revisions or corrections of the syllabus they'll be posted here.

Course Documents: Rubrics, assignment descriptions, powerpoint slides, and other course materials

Bonus Points: Any bonus opportunities will be posted in this folder.

Tools: You will find the grade center in the "Tools" folder, under "My Grades." You should regularly (weekly) check your grades to avoid grading errors.

ACADEMIC CONDUCT AND INTEGRITY: By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory

DIVERSITY: UMBC is committed to diversity at all levels and seeks to create a campus community rich in intellectual, cultural, and ethnic diversity. Diversity is defined in its fullest scope embracing racial and ethnic identity, gender identity, sexual orientation, religious affiliation, disability, foreign nationality, non-traditional student status, family income, body size, and other important characteristics. All participants in this class—including the professor, teaching assistant(s), and students—should strive to create an atmosphere that welcomes, encourages, and respects all members of the class and diverse viewpoints. During this course many viewpoints may challenge your thinking on a topic.

Any and all portions of this syllabus are subject to change at the discretion of the instructor.

Course Topics: PSYC 411

	Date	Topic	Readings[2] & Assignments[3]
UNIT 1 – The Basics of ABA	Week 1	Behavior Modification Overview	Chapter 1 (Introduction) Chapter 2 (Areas of Application: An Overview) Baer, Wolf, & Risley (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, *1,* 91-97.
	Week 2	Reinforcement Quiz 1	Chapter 4 (Increasing a Behavior with Positive Reinforcement) Chapter 5 (Increasing a Behavior with Conditioned Reinforcement) Chapter 8 (Developing Behavioral Persistence) DeLeon & Iwata (1996). Evaluation of a multiple-stimulus presentation format for assessing reinforcer preferences. *Journal of Applied Behavior Analysis*, *29*, 519-533.
	Week 3	Extinction and Punishment Quiz 2	Chapter 6 (Decreasing Behavior with Extinction) Chapter 13 (Decreasing Behavior with Punishment) Hanley et al. (2005). On the effectiveness of and preference for punishment and extinction components of function-based interventions. *Journal of Applied Behavior Analysis*, *38*, 51-65.
	Week 4	Research Methods Quiz 3	Chapter 20 (Behavioral Assessment) Chapter 21 (Direct Behavioral Assessment) Chapter 22 (Doing Behavior Modification Research) *Hanley et al. (2007). A method of describing preschooler's activity preferences. *Journal of Applied Behavior Analysis*, *40*, 603-618.* Becraft et al. (in press). Assessment of a rotating time sampling procedure: Implications for interobserver agreement and response measurement. *Education and Treatment of Children.* **~Article Review 1 of Hanley et al. (2007) due**
	Week 5	Shaping and Stimulus Control Shaping and Stimulus Control Quiz 4	Chapter 7 (Getting a New Behavior to Occur with Shaping) Chapter 9 (Responding at the Right Time and Place) Chapter 10 (Changing the Control of a Behavior with Fading) Slater & Dymond (2011). Using differential reinforcement to improve equine welfare: Shaping appropriate truck loading and feet handling. *Behavioural Processes*, *86*, 329-339. **~Intervention Paper topic due** **~Article Review 1 feedback**
	EXAM 1		

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[2] Chapters come from the Martin & Pear textbook. Articles and other resources can be found on blackboard or through umbc.edu/library

[3] Unless otherwise specified, all assignments will be submitted via Blackboard SafeAssign.

	Week	Topic	Readings
UNIT 2 – Intro to ABA Interventions and Autism	Week 6	Interventions Overview	Chapter 12 (Differential Reinforcement Procedures) Chapter 16 (Transferring Behavior to New Settings) Petscher, Rey, & Bailey (2009). A review of empirical support for differential reinforcement of alternative behavior. *Research in Developmental Disabilities*, *30*, 409-425. *~Topic feedback*
	Week 7	Antecedent Control and Motivation Language (Verbal Behavior) Acquisition *Quiz 5*	Chapters 17-19 (Antecedent Control) **Vollmer et al. (1993). The role of attention in the treatment of attention-maintained self-injurious behavior: Noncontingent reinforcement and differential reinforcement of other behavior. *Journal of Applied Behavior Analysis*, *26*, 9-21.** Sundberg & Michael (2001). The benefits of Skinner's analysis of verbal behavior for children with autism. *Behavior Modification*, *25*, 698-724. **Hartman & Klatt (2005). The effects of deprivation, pre-session exposure, and preferences on teaching manding to children with autism. *The Analysis of Verbal Behavior*, *21*, 135-144.**
	Week 8	Assessing and Treating Disruptive Behavior *Quiz 6*	Chapter 23 (Functional Assessment of Problem Behavior) Chapter 24 (Planning, Applying, and Evaluating a Behavior Program) Iwata et al. (1994). Towards a functional analysis of self-injury. *Journal of Applied Behavior Analysis*, *27*, 197-209. Durand & Moskowitz (2015). Functional communication training: Thirty years of treating challenging behavior. *Topics in Early Childhood Special Education*, *35*, 116-126. **Nuerenberger et al. (2013). An application of differential reinforcement of other behavior and self-monitoring to address repetitive behavior. *Journal of Developmental and Physical Disabilities*, *25*, 105-117.**
	Week 9	Pediatric Feeding Disorders **Guest Discussant!** *Quiz 7* Peer Review Session 1	Volkert, V. M., & Piazza, C. C. (2012). Pediatric feeding disorders. p. 323-337. **Piazza et al. (2003). Functional analysis of inappropriate mealtime behaviors. *Journal of Applied Behavior Analysis*, *36*, 187-204.** Volkert, V. M., & Vaz, P. C. M. (2010). Recent studies on feeding problems in children with autism. *Journal of Applied Behavior Analysis*, *43*, 155-159. *Review Peer Review form and instructions* *~Outline of Intervention Project (Intro and Method)*
		EXAM 2	

**Indicates articles that can be chosen for article review 2. You will choose an article in the first few weeks of class. Article Review 2 feedback will be provided within one week of the respective due date.

	Week	Topic	Readings
UNIT 3 – Selected Applications of ABA	Week 10	In the Workplace **Guest Discussant!**	Wilder et al. (2009). Applying behavior analysis in organizations: Organizational behavior management. *Psychological Services*, 6, 202-211. **Squires et al. (2007). The effects of task clarification, visual prompts, and graphic feedback on customer greeting and up-selling in a restaurant. *Journal of Organizational Behavior Management*, 27, 1-13.**
	Week 11	In the Classroom *Quiz 8*	Chapter 25 (Token Economies) Skinner, C. H., Skinner, A. L., & Burton, B. (2009). Applying group-oriented contingencies in the classroom. In A. Akin-Little et al. (Eds.), *Behavioral interventions in schools: Evidence-based positive strategies* (pp. 157-170). Washington, DC, US: American Psychological Association. Donaldson et al. (2014). An evaluation of the good behavior game in kindergarten classrooms. *Journal of Applied Behavior Analysis*, 44, 605-609. **Beaulieu et al. (2012). Effects of responding to a name and group call on preschoolers' compliance. *Journal of Applied Behavior Analysis*, 45, 685-707.**
	Week 12	Gerontology *Quiz 9* *Peer Review Session 2*	Derenne & Baron (2002). Behavior analysis and the study of human aging. *The Behavior Analyst*, 25, 151-160. **Trahan et al. (2014). The influence of antecedents and consequences on the occurrence of bizarre speech in individuals with dementia. *Behavioral Interventions*, 29, 186-303.** **~Outline of Intervention Project (Intro, Method, and Expected Results)**
	Week 13	Psychological Disorders Substance Abuse *Quiz 10*	Chapter 27 (Approaches to Behavior Therapy) Chapter 28 (Psychological Disorders) **Capriotti et al. (2012). Comparing the effects of differential reinforcement of other behavior and response-cost contingencies on tics in youth with Tourette syndrome. *Journal of Applied Behavior Analysis*, 45, 251-263.** **Reyes et al. (2006). Assessment of deviant arousal in adult male sex offenders with developmental disabilities. *Journal of Applied Behavior Analysis*, 39, 173-188.** **~Intervention Paper Draft due** **Silverman et al. (2002). A reinforcement-based therapeutic workplace for the treatment of drug abuse: Three-year abstinence outcomes. *Experimental and Clinical Psychopharmacology*, 10, 228-240.**
	Week 14	Fads, Fashion, and Science Historical and Ethical Considerations *Quiz 16*	Beyerstein, B. L. (2001). Alternative medicine and common errors of reasoning. *Academic Medicine, 76,* 230-237. Normand, M. P. (2008). Science, skepticism, and applied behavior analysis. *Behavior Analysis in Practice, 1*, 42-49 Chapter 29 (Giving it All Some Perspective) Chapter 30 (Ethical Issues) **~Draft feedback**
	Week 15	Pathways in ABA	**~Intervention Paper due**
		EXAM 3	

**Indicates articles that can be chosen for article review 2. You will choose an article in the first few weeks of class. Article Review 2 feedback will be provided within one week of the respective due date.

Intervention Proposal Assignment Instructions

The purpose of this assignment is for you to apply the information and skills you have learned in class to a real-world problem that you want to change. The problem can be a small nuisance (e.g., your roommate steals your Ramen noodles) or a larger problem (e.g., your boyfriend smokes). With guidance from me, you will select a topic that is manageable to intervene on. Although you are not required to actually implement the intervention, it should be something that you COULD implement if you choose to do so. In total, the intervention project is worth 100 points (25% of your grade), and will be submitted in phases. The specific assignments for this project are detailed below. Think of this project as something that is constantly hanging in the background.

Topic (0 points)
Your topic must be submitted for approval by Monday February 22. You will identify a behavior of another person, animal, or group that you would like to change (increase or decrease). The topic will be submitted via blackboard assignment. The assignment will ask you about the following four areas:

Participant(s): Describe whose behavior you want to change. Include the species, sex, age, and other important information that may be relevant (e.g., diagnoses, occupation)
Operational definition: Describe the behavior that you wish to change in such detail that if I saw the behavior independent of you, I would be able to know when it was and was not happening. The operational definition should be as inclusive as possible (list all things that would "count" as the behavior), indicate non-examples of the behavior (what does not "count"), and should be objective (it should be based on things that can be observed with one of the 5 senses).
Data collection method: Indicate how you will measure the behavior of interest. Will you count the behavior every time it occurs? Record the duration of the behavior? Use an interval method? Use a permanent product?
Intervention: Provide a very general idea of how you might change the behavior. Note that we have not talked too much yet about behavioral interventions, so only a sentence or two is needed here. Just start thinking about what you would do – what reinforcers could you use and how could you use them (e.g., contingent on doing X or not doing Y?).

Note: although this is not worth any points, you will not receive ANY credit for your final paper if your topic is not approved.

Peer Review and Outlines (20 points)
During the semester, you will have two opportunities to present your ideas to peers in the class. For these sessions, you will prepare an outline of your project. Your peers will provide you with feedback based on the Peer Review Form. You will do the same for your peers. Each session is worth 10 points. You will earn 5 points for your outline and 5 points for active participation in the session. You must bring a printed copy of your outline to class. Active participation is defined as making as least two substantive comments about another person's intervention proposal during the review session. Peer review sessions will be held on March 30 and April 20. Your outline should include the following:

Introduction:
- The problem of interest and why you want to change it

- Relevant research related to your chosen intervention (e.g., if you use a DRO, you should be citing research that has used DROs)
- Relevant research on the problem you want to address (e.g., if you want to decrease cursing, find other research that has looked at cursing)

Method:
- Participants and setting
- Operational definitions and measurement method
- Study design (reversal, multiple baseline, multi-element)
- Procedure – what the intervention will look like (describe all conditions – you will likely have a baseline condition and one or more intervention conditions); also describe any pre-experimental (e.g., preference assessment) or assessment procedures

Results (Peer Review Session 2 only):
- Expected patterns in baseline and other conditions
- Sketch of a graph (hand drawn is fine)
- Why you expect those results
- Alternative explanations for results
- Implications of results
- Limitations of the proposed study
- Future directions

Proposal Paper (80 points)
The proposal paper is the final product. By the time you get to the paper, you should have most of the work done through the outlines and peer reviews. The paper should be written in APA-style and be 8-10 pages, not including title page, references, or figures. An abstract is not required. You may turn in a rough draft by April 25 for feedback by May 2. <u>The final paper is due on Monday May 9</u> and should be submitted via Blackboard. Late assignments will be penalized at a rate of 8 points per day (10%). If you do not turn the proposal paper in, you will automatically receive a grade of F in the course. The final paper will include an introduction, method, and expected results and discussion. A summary of what should be included and estimated page numbers are summarized in the following chart:

Section	Content to be included	Expected Pages
Introduction	Importance of changing the behavior of interest Rationale for the chosen intervention Brief review of research relevant to your topic/problem/intervention (at least 3 empirical studies)	2-3
Method	Planned participant(s) and setting Measurement system Operational definitions Study design Intervention procedure *Note: this is a proposal, so this will all be in future tense.	3-4
Results/Discussion	Summary of *expected* results Figure (graph) of expected results per guidelines covered in class Implications of expected results	3

Limitations and future directions

Title Page • Running head • Title • Author • Affiliation • Page number All in APA style	___/5	**Intervention Paper Rubric**

Introduction
• Problem under study – why is it important? Why should it be changed?
• Review of research related to topic and interventions - 3 *empirical* articles
    What did they do?
    How is that information useful to you (how does it inform what you want to do?)?
    What are the major limitations?
• Synthesis of research: How do the three studies fit together? What is the overall picture?
• Rationale for your intervention – based on the prior research, why are you doing what you are doing?
This section should all be in past tense except when you discuss what you plan to do (that should be future tense). Remember that there should not be a heading that says "Introduction." The introduction should be about 2 pages (definitely no more than 3!).
	____/15	

Method • Participants and setting • Operational definitions of behavior(s) of interest • Description of measurement system • Study design (e.g., reversal, multiple baseline) • Description of any pre-assessments (e.g., preference assessment, functional analysis) • Intervention procedure – describe all conditions (baseline, treatment) such that someone naïve to the study could replicate it This section should be written in future tense. The method should be as detailed as possible. This section should be 3-4 pages (slightly longer is fine).	____/25	
Expected Results and Discussion (can be combined in one section) • A narrative explanation of the expected results – including information about the expected level, stability, and trend of data in each condition and overall comparative information (e.g., "the behavior will increase in intervention compared to baseline") • A figure formatted per guidelines discussed in class (not hand-drawn) that corresponds to the narrative description. The figure should be referenced in text and appear after the references. • Implications of results – why do they mean? Why is it important • Two limitations identified – why is it a limitation? What could be done differently? • Future directions – based on this study, what are the next steps? Description of expected results should be clear that the results/figure are hypothetical. This section should be about 2-3 pages.	____/25	
References and citations • All references and citations in proper APA style • Citations for all references; references for all citations	___/5	
Style and Grammar • Free of grammar and syntax errors • Written in APA style	____/5	

• Used proper tense • Language was understandable and appropriate (avoided colloquial language)	
Total	____/80

PSYC 411 Intervention Project Peer Review Form

Presenter: _____ Peer reviewer: _____

Score your peers intervention proposal on each of the following categories. For any score lower than a 4, provide feedback on ways to improve or clarify.

1 = Needs work, 5+ changes or a major change recommended
2 = Okay, 3-4 changes recommended
3 = Good, 1-2 changes recommended
4 = Perfect, no changes recommended

Objective	Score
Introduction	
The purpose of the intervention is clear.	
Presenter has a good understanding of prior research on this topic.	
Prior research presented relates to the intervention topic.	
Method	
The behavior to change is clearly defined.	
The measurement system is appropriate.	
The study design is appropriate.	
The procedures for each condition are clear enough to be replicated.	

Expect Results and Discussion (Peer Review 2 only)	
The results are realistic and not exaggerated.	
The figure matches the description of the results.	
There are no alternative explanations for the expected results.	
Presenter can articulate the implications (importance of expected results)	
Presenter identifies and explains at least two limitations.	
Presenter does not miss a major or obvious limitation.	
Presenter identifies and explains at least two future directions.	

Other comments and suggestions

Article Review Assignments

You will write two article reviews of behavior analytic articles. The first review will be on Hanley et al. (2007) (see syllabus for full citation). All students will review this article. The second review will be on an article of your choice from a pre-determined list. However, only 2 students may do the same article. We will select the articles in the first two weeks of class.

The article review should be written in APA format (typed, 12-pt Times New Roman font, double spaced, 1 inch margins). Citations and outside references are not required, but if used, should be formatted per APA guidelines. See the APA Manual or https://owl.english.purdue.edu/owl/resource/560/01/ as a guide. The finished product should be about 2-3 pages; however, this is not a strict page requirement.

Due dates and submission:
Each article review should be submitted on Blackboard by 1:00 pm on the due date.
Article Review 1: date reading is assigned
Article Review 2: varies – due on date reading is assigned
I will provide you feedback within 1 week of each submission.

It should include the following sections:[4]
Purpose: Provide a one-paragraph summary of the purpose of the article/study.
Strengths: Identify at least two strengths of the study. At least one of the strengths must be something that you independently identified about the study (i.e., not something the authors stated in the manuscript). For each strength, you will explain why it is a strength. That is, why is it good that they did the study in that way? Dedicate about 1 page to strengths.
Limitations: Identify at least two limitations of the study. At least one of the limitations must be something that you independently identified about the study (i.e., not something the authors stated in the manuscript). For each limitation, explain why that feature of the study is problematic and what, if anything, could be done differently. Dedicate about 1 page to limitations. Note: small sample size is NOT a sufficient limitation. Because most behavioral studies use a single-subject design, the sample sizes will be small (<10). Attempt to identify *different* limitations (e.g., procedures, whether or not they had control of the dependent variable).
References: provide the full reference for the article you reviewed as well as any other articles that you cited (if any).

You do NOT need to specifically include future directions, although your limitations will likely make reference to some future directions. You also do not need to provide a concluding or summarizing paragraph.

Questions to ask yourself to identify strengths and limitations:
   Introduction
   • Did the rationale for the study make sense? Was it logical?
   • Is the topic of study important? Think big picture.
   Method
   • Did the authors clearly define the dependent (outcome) variable(s)? Would you know when to score the behavior based on their definition?
   • Is the measurement system appropriate for the behavior(s)?
   • Is the measurement system appropriate given what we know about measurement error?
   • Were the procedures clearly described? Could you replicate this study based on the information provided?

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[4] The order of the sections is not extremely important, but should be make sense.

- Is the study design a good design? Will it be able to tell you whether the independent variable (e.g., treatment) is the cause of behavior change?

Results and Discussion

- Is the narrative description of the results consistent with your visual analysis of the figures/tables?
- Did the researchers demonstrate experimental control of the dependent variable (i.e., did the behavior change with corresponding changes to the independent variable)?
- Can you identify alternative and plausible explanations for why behavior changed or did not change?
- Is the display of the data interpretable (e.g., clearly labeled)?
- Does the display of data potentially mask an effect? Is there a better way to display the data?
- Are the authors' discussion points consistent with the data or do they overstate their findings and implications?
- Are the results important? Do they have meaningful implications?
- Are these results likely to be replicated in another environment or with a different population (note: see below, you must be very specific if you go this route)

Things you should not discuss as strengths or limitations[5]:

- **Sample size** – most of these studies (and behavioral studies in general) will have smaller sample sizes than you may be used to). This is normal with single subject research.
- **Generalizability** – generalizability is often a problem; however, I want you think outside the box. If you want to comment on generalizability, you need to be very specific about why the study likely won't generalize. It is not sufficient to say "it is unclear if this will work (in X environment or with X population)." Rather, you need a very compelling reason for why it would not work.
- **Writing style** – writing can make or break an article. That said, good science can often be presented in poor grammar. I want you to focus on the science aspect.

Article Review Rubric

Purpose of the study • Very brief description of why the study was conducted – what were the authors trying to find out • Should be no more than one paragraph	____/1
Strengths • Two strengths identified • One strength was independently identified (not described by the authors) • Explanation of why each is a strength: Why was what they did/said good?	____/10
Limitations • Two limitations identified • One limitation was independently identified • Explanation of why it is a limitation • Description of what could have been done differently (if anything)	____/10
Style and Grammar • Free of grammar and syntax errors • Written in APA style including references • Language was understandable and appropriate (avoided colloquial language)	____/4
Total	____/25

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[5] These points can be part of a larger review, but for this class, you should focus on procedural and interpretative aspects of the study.