



ADVANCED CONCEPTS IN INSTRUMENTAL LEARNING

WINTER 2021

4 weeks – February 18th – March 11th

Lecture (all students): Thursdays at 6 pm EST

Lectures will also be recorded for later viewing

Discussion (full students only): Thursdays at 7 pm EST

Kristina Spaulding, PhD, CAAB

info@smartdogtrainingandbehavior.com

www.smartdogtrainingandbehavior.com

Required materials

Computer, high speed internet access, microphone and speakers

Prerequisites

Introduction to Classical Conditioning OR able to define and distinguish between:

- Instrumental (operant) conditioning and classical conditioning
- Unconditioned and conditioned stimuli and responses

Knowledge of the two topics above is assumed for students in this advanced learning course. It's recommended that students take the Introduction to Classical Conditioning class first if they don't have a strong foundation in the topics above.

Course Description and Organization

Content

Positive and negative reinforcement and punishment are only part of the story about how animals learn, and they only get us so far. A more complete picture of what drives behavior will vastly expand your ability to train dogs and address behavior issues.

Upon completion of this course, students should be able to:

- Explain the difference between classical conditioning, habituation, and sensitization
- Identify the different types of classical conditioning, and predict what happens when a dog encounters multiple stimuli
- Explain the impact of stress on learning
- Discuss conditioned taste aversion and its effect on behavior (it's unique and I'll tell you why!)
- Describe what we know about observational learning in dogs, including their ability to imitate (and how we can use that to amazing effect!)
- Explain the neurobiology of instrumental and fear learning and how it relates to behavior



- Make predictions about how an individual might learn under particular conditions and how that learning will affect behavior.
- Apply knowledge of learning to working with dogs
- Be able to analyze, integrate and apply new information to fit into current framework of knowledge. If it doesn't fit into current framework, be able to pursue novel paths of thinking.

Approach

I believe that the most effective learning occurs when students are not only provided with the facts, but also provided ample opportunity to use that information in concrete ways, engage in challenging activities, interact with others and receive frequent feedback on their progress.

Therefore, this course will be taught using an approach that encourages collaboration and active learning. All students will have access to the lecture which will be presented live. During lecture, students will have the opportunity to ask questions and to engage in some (optional) interactive discussion. Lectures will also be recorded for those who cannot attend live.

Full students will also participate in a live discussion session. Discussions are built around interactive activities designed to enable students to master the course material, apply it to hands on work with animals and connect it with other aspects of training and behavior. This allows full students to maximize their learning, as well as build a personal relationship with the other students and myself. Discussion sections depend on live participation and are not recorded. This also gives students permission ask questions and share their ideas without any concern about being recorded.

I began my teaching career by teaching at a university and I hold students in my online courses to the same standards. I have high expectations for engagement and quality of work. This is because I have confidence that my students can meet—and often exceed—these expectations! I strongly feel that if I am going to set a high bar, then it is my job to step up and make sure my students can reach it. This means that I hold myself to a very high standard as well and I love it when students reach out if they are struggling with the material in any way. I am happy to help! If you haven't taken a college course before, but are willing to put in the work and reach out for help if needed, then you should do well in this course. I only set goals that I am confident my students can achieve!

CEUs

Auditors:

- IAABC - 4 CEUs
- CCPDT pending as of 2/9/21 (4 expected)
- CEUs will require watching the lectures and submitting the secret words.

Full students:

- IAABC – 9.5 CEUs
- CCPDT pending as of 2/9/21 (8 expected)



- CEUs will require watching the lectures and submitting the secret words, attending 75% or more of the discussion sections and completion of work in class as well as the completion of a comprehensive quiz. The quiz must be passed with a score of 80% or higher. If you receive less than 80% on the quiz you may retake the quiz once, after contacting the instructor for clarification on the missed questions.
- Refunds will not be granted if you are unable to attend class and therefore unable to complete the required work. Excused absences will be granted in case of emergencies and illness (with proper documentation).

Schedule

Week 1 – Advanced concepts in classical conditioning

- Distinguishing between classical conditioning, habituation, and sensitization
- Fragility of extinction
- Impact of stress on fear learning and extinction

Week 2 – Multiple stimuli

- Classical conditioning involving multiple stimuli:
 - Higher-order conditioning
 - Overshadowing
 - Blocking
 - Latent inhibition.

Week 3 – Conditioned taste aversion and observational learning

- Define conditioned taste aversion and explain what makes it unique (9)
- Observational learning
 - What is it?
 - How do we identify it?
 - Copying and imitation
 - Research in dogs

Week 4 – Neurobiology

- Neurological basis for learning
- Fear learning
 - Emotional boost to memories
 - Describe the two neural pathways for fear
- Neurobiology of instrumental learning
 - Brain areas
 - Hedonic vs motivational value
 - Dopamine and endogenous opioids