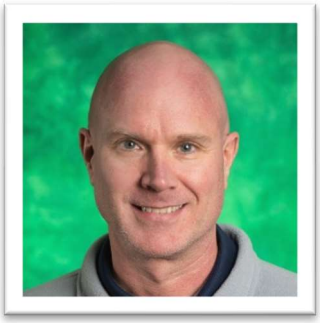
Course Syllabus BEHV3200

INSTRUCTOR INFORMATION



Bryan S. Lovelace LBA

- Office Hours: By Appointment Only
- Email Address: bryan.lovelace@unt.edu

Bryan earned his bachelor's degree in applied Behavior Analysis in 2004 and his master's degree in Behavior Analysis in 2008. Following his graduation, the Department of Behavior Analysis appointed him to teach a course titled "Science, Skepticism, and Weird Behavior" (BEHV 3200). In late 2018, Bryan developed a follow-up course, "Clear Thinking about Weird Behavior" (BEHV 3250), to expand on the concepts of science and skepticism introduced in the original course. In addition to his academic contributions, Bryan is a licensed amateur radio operator (call sign KI5LOV) and an active member of the Denton County Amateur Radio Emergency Service (ARES). Through ARES, he provides critical support in emergency communications, storm spotting, damage assessment, and related services. Bryan also serves as a member of the Denton County Citizen Emergency Response Team (CERT), further demonstrating his commitment to community service.

GUEST LECTURER

Rudy Reynoso

Rudy Reynoso is a professional magician and keynote speaker who has spent the past 15 years performing for Fortune 500 companies and helping professionals elevate their communication. He's also the producer of The Give and Go, the second-largest soccer podcast platform in the

U.S., with over half a million followers. A proud UNT alumnus, Rudy served as the university's first Latino Student Body President and Student Regent. He combines his background in magic, business, and leadership to share insights on influence, psychology, and impactful speaking.

COURSE DESCRIPTION

This course will teach you how to utilize scientific critical thinking to examine various strange phenomena, including alleged paranormal events, magic, superstition, bogus therapies, pseudoscience, and psychics. One goal is to teach you how to think about weird things when you encounter them. Another goal is to teach you how to have an open mind, but not so open that your brain falls out.

Federal regulations state that students may apply only 3 fully-online semester credit hours (SCH) to the hours required for full-time status for F-1 Visa (DOC) holders. Full-time status for F-1 Visa students is 12 hours for undergraduates and 9 hours for graduate students.

HOW TO SUCCEED IN THIS COURSE

- Attendance during zoom sessions must be a priority, attendance in these sessions is tied to your final grade in this course.
- Complete all assignments by the due dates.
- Communicate with the instructor if you must miss a class.
- Most problems or questions can be addressed via email, if problems cannot be addressed that way, I will reach out to you and set up a date and time to meet with you individually on zoom.

UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and information on how you can be successful at UNT, go to unt.edu/success and explore unt.edu/wellness. To get all your enrollment and student financial-related questions answered, go to scrappysays.unt.edu.

REQUEST FOR ACCOMMODATIONS

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodation at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information,

refer to the Office of Disability Access website (https://studentaffairs.unt.edu/office-disability-access). You may also contact ODA by phone at (940) 565-4323.

SUPPORTING YOUR SUCCESS IN AN INCLUSIVE ENVIRONMENT

I value the many perspectives students bring to our campus. Please work with me to create a classroom culture of open communication, mutual respect, and belonging. All discussions should be respectful and civil. Although disagreements and debates are encouraged, personal attacks are unacceptable. Together, we can ensure a safe and welcoming classroom for all.

COURSE MATERIALS

All course materials will be provided to you via canvas and during lectures.

COURSE REQUIREMENTS & SCHEDULE

Activities

- Paranormal Profiles (50 points total)
- Social Contract (30 points total)
- Assigned Readings (70 points total)
- Lecture Questions (60 points total)
- Perspectives Assignment (60 points total)
- Unit Quizzes (300 points total)
- Bonus Questions on Quizzes (30 points total)
- TOTAL POINTS AVAILABLE (570)

Grading

- A: 432 - 535 points
- B: 384 - 431 points
- C: 336 - 383 points
- D: 288 - 335 points
- F: 287 points or less

Schedule

If there is an event that causes the campus to be closed, or other event that could impact class, you will be notified by Eagle Alert or via Canvas notification.

Section I: Paradigm Shifts I

Section I: Paradigm Shifts I: Overview

In this first module you will be introduced to the concept of paradigm shifts. In the paradigm shift series, you will learn about what makes science different from any other human activity. One of the properties that makes science unique are paradigm shifts. In this first lecture you will be introduced to the concept of paradigm shift by learning about one of the greatest stories ever told, your journey begins with a story about comets and how our understanding of these mysterious objects changed from being supernatural signs from gods into dirty snowballs that obey natural laws.

Section I: Paradigm Shifts I: Objectives

- Define Paradigm Shift and describe why these are unique to science.
- Define comet and describe where they come from and what they are made of.
- Describe the ancient view of comets.
- Describe how Isaac Newton discovered gravity.
- Define anomaly and describe what makes science different.

Section I: Paradigm Shifts I: To-Do List

- Complete the Paranormal Profile Baseline
- Sign the Social Contract
- Attend the lectures and answer lecture questions.
- Read "A Comet Tale" and complete reading quiz.

Section I: Paradigm Shifts II & III

Section I: Paradigm Shifts II & III: Overview

In this module, you will be learning more about what makes science different. You will take a journey through time beginning at 100 AD in the age of astrology and then progress forward through various paradigm shifts that took place in the age of enlightenment. Finally, you will end with the most recent and significant paradigm shift, the emergence of modern physics.

Section I: Paradigm Shifts II & III: Objectives

- Define anomaly and describe what makes science different
- Define god of the gaps and how this relates to Xerxes, ancient Greeks, and Epilepsy.
- Describe the Ptolemaic revolution including the zodiac, the Ptolemaic paradigm & retrograde motion.
- Describe the Copernican revolution including the role of Galileo's observations and how these justified the Copernican paradigm.
- Describe Einstein's four great insights: equivalency of space & time, equivalency of mass & energy, universal speed limit, new concept of gravity.
- Describe how Einstein's ideas were tested including: gravitational lensing & spacetime dilation
- Describe Einstein's legacy including cosmic background radiation, Einstein's biggest blunder.

Section I: Paradigm Shifts II & III: To-Do List

- Attend lectures and complete lecture questions.
- Read, "Classical Physics" & "Modern Physics" and complete the reading quizzes for both chapters.
- Start the perspectives assignment (due at the end of the semester)

Section I: Superstition & Weird Beliefs & UNIT QUIZ I

Section I: Superstition & Weird Beliefs: Overview

For this module, you will be introduced to what science says about superstition and the paranormal.

All of us know someone who is superstitious. You may have some superstitions yourself. Superstitious beliefs are quite common. For example, according to a 2005 Gallup poll, 55% of Americans believe in psychic healing, 41% believe in extrasensory perception, 42% believe in demonic possession, 32% believe in ghosts. Superstitions even extend into the sports world. For example, in baseball it is taboo to mention a "no hitter" to the pitcher (Vyse, 2014).

Games of chance are associated with superstitious behaviors. Craps players have formed all kinds of interesting rules about rolling the dice (Vyse, 2014). For example, rubbing the dice against a lucky player will give you a lucky roll or snapping your fingers influences the outcome of the roll (Vyse, 2014). Players of slot machines often believe that standing on one leg will influence the outcome of the game. There are plenty of stories where slot players refuse to leave their machine to use the bathroom because they believe that the next pull of the one armed bandit will be the winner and they don't want someone else to get the jackpot. In each one of these examples, the game is governed by chance. There is no evidence that the player's behavior influences the outcomes (Vyse, 2014). There are good reasons why people behave this way and we will discuss some of these reasons in this week's lecture.

Section I: Superstition & Weird Beliefs: Objectives

- Define superstition, weird beliefs and weird experiences.
- Describe Malinowski's principle and how this motivates people to believe weird things
- Describe the Peter Popoff Affair and how Malinowski's principle explains why people fell for it.
- Define contiguity and describe two types of contiguity: Spatial and Temporal
- Describe the work of E.L. Thorndike and the law of effect
- Describe the work of Edwin Guthrie and his work with contiguity
- Describe the work of B.F. Skinner and his work on superstition in the pigeon
- Describe the work of Wagner and Morris and their work on superstition in humans

Section I: Superstition & Weird Beliefs: To-Do List

- Attend lectures and complete lecture questions
- Read, "Superstition & Weird Beliefs" and complete the reading quiz.

- Attend Quiz I Review
- Take UNIT QUIZ I

Section II: The Possibility of the Impossible

Section II: The Possibility of the Impossible: Overview

For this module, you will be introduced to the fundamentals of logic. Specifically, we will be discussing the possibility of the impossible.

Section II: The Possibility of the Impossible: Objectives

- Define the law of non-contradiction.
- Identify examples of the law of non-contradiction.
- Identify examples of necessary truths and necessary falsehoods.
- Describe how the use of logic to evaluate language can be a useful guide for finding what is true and what isn't.

Section II: The Possibility of the Impossible: To-Do List

- Attend lectures and complete lecture questions.

Section II: Perception & Reality I

Section II: Perception & Reality I: Overview

For this module, you will learn about the role that personal experience plays in determining what you perceive as reality.

Our personal experiences are reliable under many circumstances, our personal experiences can mislead us in unexpected ways when our experiences are exceptional or mysterious (Schick & Vaughn 2014). Our ability to perceive the world, our memories, consciousness, and our ability to process information, as powerful as they are, have limits (Schick & Vaughn 2014). Because of these limits, we should expect to have many experiences with natural causes that seem paranormal or supernatural (Schick & Vaughn 2014). This means even if there is no such thing as the supernatural, because of our biology, humans will have supernatural experiences (Schick & Vaughn 2014).

Fortunately, there is a way to think about personal experience that increases the probability that we will get to the truth. The journey toward the truth involves learning about the peculiar aspects of our perception, memories, consciousness and information processing abilities that influence our personal experience and how we judge those experiences. The first step on this journey is to learn the following rule: just because something seems real doesn’t mean that it is (Schick & Vaughn 2014).

Section II: Perception & Reality I: Objectives

- Define personal experience and describe why it is not reliable as a sole form of evidence.
- Describe how personal experience relates to perception.

- Describe errors in perception such as the shadow illusion, size constancy.
- Describe expectancy effects
- Describe the effects of vague situations on perceptions such as visual and auditory pareidolia.
- Describe common errors in judgment such as the confirmation bias and availability error.
- Define filter bubbles.
- Describe the rules for avoiding confirmation bias, availability error, and filter bubbles.

Section II: Perception & Reality I: To-Do List

- Attend lectures and complete lecture questions.
- Read "Perception & Reality" and complete the reading quiz.

Section II: Perception & Reality II

Section II: Perception & Reality II: Overview

For this module, you will continue to learn about the role that personal experience plays in determining what you perceive as reality.

Our personal experiences are reliable under many circumstances, our personal experiences can mislead us in unexpected ways when our experiences are exceptional or mysterious (Schick & Vaughn 2014). Our ability to perceive the world, our memories, consciousness, and our ability to process information, as powerful as they are, have limits (Schick & Vaughn 2014). Because of these limits, we should expect to have many experiences with natural causes that seem paranormal or supernatural (Schick & Vaughn 2014). This means even if there is no such thing as the supernatural, because of our biology, humans will have supernatural experiences (Schick & Vaughn 2014).

Fortunately, there is a way to think about personal experience that increases the probability that we will get to the truth. The journey toward the truth involves learning about the peculiar aspects of our perception, memories, consciousness and information processing abilities that influence our personal experience and how we judge those experiences. The first step on this journey is to learn the following rule: just because something seems real doesn't mean that it is (Schick & Vaughn 2014).

Section II: Perception & Reality II: Learning Objectives

- Define personal experience and describe why it is not reliable as a sole form of evidence.
- Describe how personal experience relates to perception.
- Describe errors in perception such as the shadow illusion, size constancy.
- Describe expectancy effects
- Describe the effects of vague situations on perceptions such as visual and auditory pareidolia.
- Describe common errors in judgment such as the confirmation bias and availability error.
- Define filter bubbles.
- Describe the rules for avoiding confirmation bias, availability error, and filter bubbles.

Section II: Perception & Reality II: To-Do List

- Attend lectures and complete lecture questions.

Section II: Perception & Reality III & UNIT QUIZ II

Section II: Perception & Reality II: Overview

For this module, you will complete your learning about the role that personal experience plays in determining what you perceive as reality.

Our personal experiences are reliable under many circumstances, our personal experiences can mislead us in unexpected ways when our experiences are exceptional or mysterious (Schick & Vaughn 2014). Our ability to perceive the world, our memories, consciousness, and our ability to process information, as powerful as they are, have limits (Schick & Vaughn 2014). Because of these limits, we should expect to have many experiences with natural causes that seem paranormal or supernatural (Schick & Vaughn 2014). This means even if there is no such thing as the supernatural, because of our biology, humans will have supernatural experiences (Schick & Vaughn 2014).

Fortunately, there is a way to think about personal experience that increases the probability that we will get to the truth. The journey toward the truth involves learning about the peculiar aspects of our perception, memories, consciousness and information processing abilities that influence our personal experience and how we judge those experiences. The first step on this journey is to learn the following rule: just because something seems real doesn't mean that it is (Schick & Vaughn 2014).

Section II: Perception & Reality II: Learning Objectives

- Define personal experience and describe why it is not reliable as a sole form of evidence.
- Describe how personal experience relates to perception.
- Describe errors in perception such as the shadow illusion, size constancy.
- Describe expectancy effects
- Describe the effects of vague situations on perceptions such as visual and auditory pareidolia.
- Describe common errors in judgment such as the confirmation bias and availability error.
- Define filter bubbles.
- Describe the rules for avoiding confirmation bias, availability error, and filter bubbles.

Section II: Perception & Reality II: To-Do List

- Attend lectures and complete lecture questions.
- Attend Unit Quiz II Review
- Take UNIT QUIZ II

Section III: Belief & Evidence I

Section III: Belief & Evidence I: Overview

For this module, you will be introduced to the concepts of knowledge, beliefs, & evidence.

Knowledge is power. Those in the know are more likely to make the right decisions because their beliefs are tethered to reality (Schick & Vaughn, 2014). How does one acquire knowledge then? To answer this question, one must understand the relationship between belief, facts, and evidence (Schick & Vaughn, 2014). Then one must learn to practice something called commonsense skepticism (Schick & Vaughn, 2014). You will learn about these things and more in this section of the course.

Section III: Belief & Evidence I: Learning Objectives

- Describe how beliefs relate to actions.
- Define beliefs, facts, and knowledge.
- Describe how reasons relate to the probability of a claim.
- Describe how to use the belief scale.
- Define commonsense skepticism and describe how to use it to evaluate claims.
- Describe how to evaluate expert opinions.
- Describe how to apply Hume's Maxim.
- Describe the ethics of proportioning belief to the evidence.

Section III: Belief & Evidence I: To-Do List

- Attend lectures and complete lecture questions.
- Read "Belief & Evidence" and complete the reading quiz.

Section III: Belief & Evidence II

Section III: Belief & Evidence: Overview

For this module, you will continue to learn about the role that evidence plays in justifying beliefs.

Knowledge is power. Those in the know are more likely to make the right decisions because their beliefs are tethered to reality (Schick & Vaughn, 2014). How does one acquire knowledge then? To answer this question, one must understand the relationship between belief, facts, and evidence (Schick & Vaughn, 2014). Then one must learn to practice something called commonsense skepticism (Schick & Vaughn, 2014). You will learn about these things and more in this section of the course.

Section III: Belief & Evidence: Learning Objectives

- Describe how beliefs relate to actions.
- Define beliefs, facts, and knowledge.
- Describe how reasons relate to the probability of a claim.
- Describe how to use the belief scale.
- Define commonsense skepticism and describe how to use it to evaluate claims.
- Describe how to evaluate expert opinions.
- Describe how to apply Hume's Maxim.
- Describe the ethics of proportioning belief to the evidence.

Section III: Belief & Evidence: To-Do List

- Attend lectures and complete lecture questions.

Section III: Relativism & Reality I & II

Section III: Relativism & Reality I: Overview

For this module, you will be introduced to the philosophy of relativism and realism and the differences between them.

Relativism is a philosophy that deals with what it considered true. In this sense, it is a competing philosophy to what this textbook has been promoting. Before we delve into what relativism is, it will be helpful to the reader to understand the philosophy realism. The assumption of realism underpins all the arguments made in this textbook. Realism states that there is an external reality that is separate from our perceptions of it (Schick & Vaughn, 2014). Realism states that this reality is empirical and therefore knowable. Furthermore, realism implies that there is one world that constitutes reality and that all of us exist within this reality, a concept called monism. By comparison, the assumptions of relativism state that there is no objective truth and that all truth is relative (Schick & Vaughn, 2014). These philosophies are important because they are currently being debated in our culture wars.

Section III: Relativism & Reality I: Learning Objectives

- Define subjective relativism, cultural relativism, conceptual relativism, and realism.
- Describe the difference between relativism & realism.
- Be able to apply reductio ad absurdum to relativistic arguments.
- Describe why conceptual relativism is self-refuting.
- Describe three rules for avoiding the trap of relativism.

Section III: Relativism & Reality I: To-Do List

- Attend lectures and complete lecture questions.
- Read "Relativism & Reality" and complete the reading quiz.
- Complete the paranormal profile follow-up.
- Submit your perspectives assignment.
- Attend UNIT QUIZ III review.
- Complete UNIT QUIZ III

ATTENDANCE & PARTICIPATION

Class Attendance is Mandatory

- Classes will be held via Zoom (if taking the internet course) or in-person (if taking the in-person course) on Tuesdays and Thursdays from 8 am to 9:20 am or 6 pm to 7:20 pm depending on your course section.
- Class attendance will be recorded using Canvas (and via other methods as determined by the instructor).
- Class attendance is mandatory, your grade will be affected by missing class.
- Student are allowed 3 unexcused absences during the semester.
    - An unexcused absence is any absence that is not approved by the instructor.
- There is no set limit to the number of *excused* absences a student may have, but I reserve the right to impose a limit if I see fit.
    - An *excused* absence is any absence that was approved by the instructor.
- You will not receive an excused absence because of **work related issues**.

- You will not receive an excused absence because of **bad traffic**.
- You will not receive an excused absence for **bad weather** *unless* the university is closed *because* of the weather event.
    - E.g. you will not receive an excused absence because you are worried about a thunderstorm, driving in the rain unless the university announces (on the university website) that the university is closed because of storms.

GRADE-RELATED POLICIES

Late Work

You must turn in your work before the end of the semester. If you don't turn in your work, you will not pass this class.

Grade Disputes

You are required to wait 24 hours before contacting me to dispute a grade. Within that time, I expect that you will review the assignment details and reflect on the quality of the work you turned in. If you would still like to meet, email me to set up a meeting. You should come to our scheduled meeting with specific examples that demonstrate that you earned a higher grade than you received. If you miss your scheduled meeting, you forfeit your right to a grade dispute. If you do not contact me to schedule a meeting within seven days of receiving your grade, you also forfeit your right to a grade dispute.

Extra Credit

The only opportunities for extra credit are the extra credit questions on each unit quiz.

- There are three extra credit questions available. one for each unit quiz, worth 10 points each.