

# **SYLLABUS - BEHV3200**

## **INSTRUCTOR INFORMATION**

- Instructor Name: Bryan S. Lovelace MS BCBA LBA
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- Office Hours: By Appointment Only
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## **REQUEST FOR ACCOMMODATIONS**

The Department of Behavior Analysis in cooperation with the Office of Disability Accommodation, gladly complies with the Americans with Disabilities Act in making reasonable accommodation for qualified students with disabilities. You are required to present your written request for accommodation within 1 week of the first class period.

### **PURPOSE**

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.

## **COURSE MATERIALS**

This course uses the Top Hat platform to host course materials.

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- Top Hat is also used to take attendance and to provide grades for assignments.
- The least expensive way to purchase access to Top Hat is to buy access directly through their website.
- You must receive an invite from me to purchase Top Hat.
- You must use your UNT email address to sign up.
- Top Hat is required for this course.

## **LEARNING OBJECTIVES**

By the end of this course, students will be able to do the following:

- 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 role that Stardust, Deep Impact, and Rosetta missions played in the study of comets.
- Describe the ancient view of comets.
- Describe how Isaac Newton discovered gravity.
- Describe the power of natural explanations.
- Define anomaly and describe what makes science different.
- Define two types of thinking errors.
- 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.
- Define Synthesis and how this relates to paradigm shifts and science.
- Describe the anomalies of Classical Physics
- Describe the discovery of electromagnetism and why this was important.
- Describe why Einstein's theory of relativity was superior to Newton's universal gravitation.
- 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.
- 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
- 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.
- 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.
- 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.

## **CLASS ATTENDANCE**

Class Attendance is Mandatory

- Class attendance will be recorded using Top Hat.
- Class attendance will be recorded at any point during class, it might be at the beginning or class, the end of class, or anytime in between.
- Do not attempt to register attendance for another student, if you are caught attempting to record attendance for another student you, and the other student will be sanctioned by the Dean of Students.

Students are allowed up to 3 unexcused absences in this course

- An unexcused absence is one that has not been approved by the instructor.
- You do not need the instructor's approval to use your unexcused absences.
- At the end of the semester, if you have more than 3 unexcused absences the instructor reserves the right to lower your final grade in this course by one letter grade for each additional unexcused absence.
- If you have acquired more than 6 unexcused absences in this course, the instructor reserves the right to drop you from the course.

There is no limit for how many EXCUSED absences you can acquire

- An excused absence is one that has been approved by the instructor.
- For an absence to be approved by the instructor, you must seek approval before the absence is taken and there must be some form of written justification for the absence (i.e. I can't just accept your word).
- For example, If you have a wedding to attend, I can't just take your word that you attended a wedding, I need you to bring me a program or something tangible that shows you attended a wedding.
- Although there is no limit to how many excused absences you can have, the instructor reserves the right to place a limit on students who are missing too many classes.

## POINT STRUCTURE

ASSIGNMENTS	POINTS
SOCIAL CONTRACT	5
ATTENDANCE POLICY	5
GRADING POLICY	10
READING ASSIGNMENTS – x7	70
PARANORMAL PROFILES – x2	50
LECTURE QUESTIONS – varies	60
UNIT QUIZZES – x3	300
UNIT QUIZ BONUS POINTS – x3	30
<i>TOTAL POINTS</i>	<i>530</i>
LETTER GRADE	POINTS REQUIRED
A	450 – 530
B	400 – 449
C	350 – 399
D	300 – 349
F	299 or less

## ASSIGNMENT TYPES

There are four types of assignments that you will encounter during this course: Unit Quizzes, Paranormal Profiles, Reading Assignments, & Lecture Questions.

### UNIT QUIZZES

- There are 3 unit quizzes worth a total of 330 Points (with bonus questions added).
- There are 110 points possible on each quiz, 100 points for the main quiz questions & 10 points for the bonus question.
- Once assigned, unit quizzes will be available for 7 consecutive days.
- If you fail to take a unit quiz within that 7 day period, you will be given another opportunity to take the quiz at the end of the semester.
- Unit quizzes are open-book
- There is no final or midterm exam.

## PARANORMAL PROFILES

- There are 2 Paranormal Profile assignments in this course: Paranormal Profile Baseline & Paranormal Profile Followup.
- Each Paranormal Profile is worth 25 Points each for a total of 50 Graded Points. One is given at the beginning of the semester, the other is given as the last assignment at the end of the semester.

- Paranormal Profile assignments are in a questionnaire format, there are no correct answers for each question; therefore you should select the answer that best reflects your attitude toward each question.
- Answer each question honestly, don't be tempted to answer these questions like you think I would answer them.
- The purpose of the Paranormal Profiles is to measure how much your exposure to the material of this course changes your position toward these questions.
- The Paranormal Profile Baseline will be issued as your very first assignment for this course.
- The Paranormal Profile Followup will be issued as the very last assignment for this course.

## **READING ASSIGNMENTS**

- There are 7 chapters (Reading Assignments) that you will be assigned during this course.
- Reading Assignments will be assigned progressively throughout the semester as we work through the course material.
- Once assigned you will have until the end of the semester to complete Reading Assignments.
- Each Reading Assignment is worth 10 points for a total of 70 points.
- Points are earned by answering the questions interspersed throughout each chapter.

## **LECTURE QUESTIONS**

- There are 12 sets of lecture notes that will be made available to you as the semester progresses.
- Lectures are only presented during class.
- Each set of lecture notes provides an opportunity to earn 5 points with 60 points possible by the end of the semester.

## **OTHER GRADED ASSIGNMENTS**

- All students are required to read and agree to the following documents: Social Contract, Attendance Policy, & the Grading Policy (this document).
- Each of these assignments has a single question located at the bottom of the document, you must answer this question with either, "I AGREE" or "I DISAGREE".
- If you answer, "I AGREE" you will earn 5 points for the social contract, 5 points for the attendance policy, and 10 points for the grading policy.
- If you answer, "I DISAGREE" or you fail to answer these questions, you will be dropped from the course.

## **TENTATIVE COURSE TIMELINE**

- WEEK 1: Introduction | A Comet Tale
- WEEK 2: Classical Physics
- WEEK 3: Modern Physics
- WEEK 4: Superstition & Weird Beliefs | UNIT QUIZ 1
- WEEK 5: The Possibility of the Impossible
- WEEK 6: Perception & Reality
- WEEK 7: Perception & Reality
- WEEK 8: Perception & Reality | UNIT QUIZ 2
- WEEK 9: Beliefs & Evidence
- WEEK 10: Beliefs & Evidence
- WEEK 11: Relativism & Reality

- WEEK 12: Relativism & Reality
- WEEK 13: UNIT QUIZ 3