

# BEHV 3200 – SYLLABUS

## SCIENCE SKEPTICISM & WEIRD BEHAVIOR

<b>INSTRUCTOR:</b>	Bryan S. Lovelace MS BCBA	<b>EMAIL:</b>	Bryan.Lovelace@unt.edu
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<b>OFFICE HOURS:</b>	By appointment only		

### 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 accommodations for qualified students with disabilities. *You are required to present your written request for accommodation within 1 week of the first class period.*

### PURPOSE:

In this class we will utilize scientific critical thinking to examine the causes of various strange phenomena, including alleged paranormal events, magic, superstition, mystery illness, bogus therapies and pseudoscience. The main goal is to teach you how to think about weird things when you encounter them.

### DISCLAIMER:

- Topics discussed in this class will make some students uncomfortable and some people may even find the content offensive, so be warned.
- Any topic is fair game for discussion and we will be discussing science, religion, and politics.
- We will question commonly held beliefs that some think should not be questioned.
- This class emphasizes a naturalistic and scientific perspective as being superior to all other ways of knowing and understanding nature and the universe in general.
- Colorful language, explicit topics and materials may be used in this course.
- Expect that argument and lively discussion will be a part of this class.
- If you are not okay with these things, then drop the course.

### OBJECTIVES:

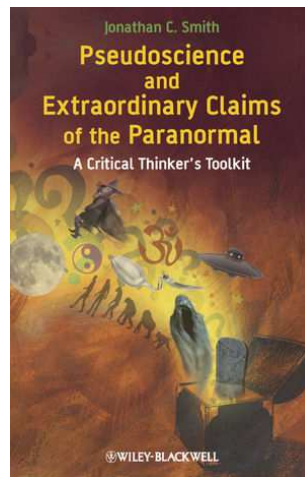
- Describe 3 scientific paradigm shifts that have occurred within the last 1000 years and explain why they happened.
- Describe the importance of temporal and spatial contiguity in relation to perceiving weird things.
- Describe how the environment selects superstitious behavior in organisms.
- Describe the role that uncertainty plays in why people believe weird things.
- Describe the “law of non-contradiction” and why it must be true.
- Describe differences and similarities between logical and physical possibilities.
- Describe at least two principles of critical thinking.
- Define “knowledge” and how it relates to evidence & belief.
- Demonstrate commonsense skepticism by proportioning your belief to the evidence.

## SOURCE MATERIALS:

### **Pseudoscience and Extraordinary Claims of the Paranormal: A Critical Thinker's Toolkit**

Jonathan C. Smith

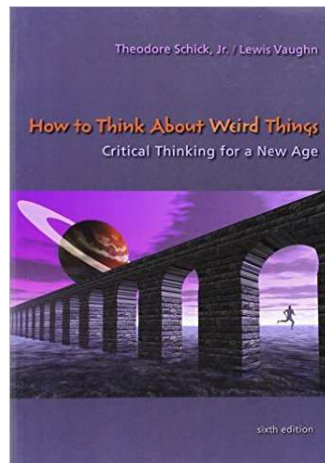
ISBN: 978-1-4051-8122-8



### **How to Think about Weird Things: Critical Thinking for a New Age 6<sup>th</sup> Edition**

Theodore Schick & Lewis Vaughn

ISBN-13: 978-0073535777



## ACTIVITIES:

- Pre-Post Paranormal Profile Questionnaire
- Reading Assignments
- Lectures, Videos, Discussions
- Quizzes

## CLASS ATTENDANCE:

- **Class attendance is mandatory.**
  - To be counted as present, students must sign an attendance sheet.
  - Students who are late to the class by 30 or more minutes will be counted as absent unless prior arrangements have been made with the instructor.
  - Students must sign the attendance sheet for themselves only! It is considered cheating for one student to sign the attendance sheet for another. Anyone caught doing this will suffer consequences.

- **Students are allowed 3 unexcused absences in this course.**
  - Each unexcused absence over 3 will drop your final score in this course by one letter grade.
  - 6 or more unexcused absences are grounds for being dropped from this course.
- **There is no set limit for excused absences in this course.**
  - What is considered an excused absence is determined case by case.
    - Examples of EXCUSED ABSENCES include but are not limited to:
      - Your own wedding that is verifiable
      - A funeral of a close family member or friend that is verifiable
      - You were sick or your kid was sick and this is verifiable
      - Military, National Guard, and other public service duty that is verifiable.
      - School related events that are verifiable.
      - Court or legal events that are verifiable
      - Any prior approved arrangement with me (your professor).
    - Examples of UNEXCUSED ABSENCES include but are not limited to:
      - Planned/unplanned vacations
      - Taking care of other people's kids.
      - Anything work related unless you are in the military, national guard, or you are a public servant.
      - Birthdays including your own.
      - Forgetting to sign the attendance sheet even though you attended class.
      - Coming to class more than 30 minutes late.
      - Traffic getting to UNT (unless the freeway is shut down).
      - Weather related events (unless the University website says we are closed due to the weather).
  - The instructor must be notified and approve of the excused absence beforehand.
  - The instructor reserved the right to set a limit for students who are missing too many classes.
- **Students are responsible for tracking their own absences.**
  - Do not ask the instructor how many absences you have accumulated during the semester.

## POINTS:

### ASSIGNMENT & POINT STRUCTURE

ASSIGNMENT	OPPORTUNITIES	POINTS
PARANORMAL PROFILE	2 X 25 POINTS	50
READING ASSIGNMENTS	5 X 10 POINTS	50
QUIZZES	3 X 100 POINTS	300
BONUS QUESTIONS	3 X 10 POINTS	30
<b>TOTAL POSSIBLE POINTS</b>		<b>430</b>

## GRADES:

### GRADE STRUCTURE

A	360-400
B	320-359
C	280-319
D	240-279
F	239 or below

## **COURSE CONTENT:**

### **INTRODUCTION & SYLLABUS REVIEW**

In this section students will learn what the course is about and will be introduced to a general overview of the syllabus and what is expected of them in this class.

### **SUPERSTITION & WEIRD BELIEFS**

In this section students will learn what is defined as weird. The topics covered in this section do not appear in the text book and are only covered during class time and on the lecture notes. Topics include: history of superstition & magic, scientific study of superstitious behavior, superstition within different professions & demographics. Students will learn about the role that temporal and spatial contiguity plays in the selection of superstitious behavior and why humans in particular are prone to believing weird things.

### **SCIENCE, THEORY & PARADIGM SHIFTS**

In this section students will be introduced to the concept of the *paradigm shift* and how this relates to technological and epistemological developments in the history of science and the search for truth. This story will be told in the context of how the field of cosmology has evolved over the past 1000 years. Students will learn to differentiate between naturalistic and supernatural explanations of nature.

### **QUIZ I**

QUIZ I will cover material presented in Superstition and Weird Beliefs, & Science Theory and Paradigm Shifts.

### **LOOKING FOR TRUTH IN PERSONAL EXPERIENCE**

In this section, students will learn that, “seeing is not always believing”. Students will learn how it is possible for someone to “sense” something is isn’t there and to “remember” things never happened. Students will learn about the conditions under which one may provisionally accept personal experience as being real and the conditions under which one should withhold having an opinion one way or another.

### **KNOWLEDGE BELIEF AND EVIDENCE**

In this section, students will learn what facts are and how they are justified. Students will also learn how knowledge, belief and evidence relate to each other and students will learn about common sense skepticism and these ideas relate to the ethics and morals in our societies.

### **THE CONTINUUM MYSTERIOSUM**

In this section, students will learn “what is the realm of the paranormal”. Students will begin by learning a very simple definition: Paranormal claims contradict what we know about matter and energy as discovered through the science of physics. Then students will expand their understanding of this topic by learning that some mysteries are bigger than others. For example, cherishing a magic rabbit’s foot isn’t as dramatic as going to war over an astrological reading. Next, students will learn how to organize paranormal and supernatural claims into eight groups placed on a spectrum called the “Continuum mysteriosum” (continuum of mysteries). Finally, students will apply what they have learned by studying a fable called: “10 gods of planet paranormia”.

### **WHY STUDY THESE THINGS**

In this section, students will learn the reasons why it is important to study the worlds of the paranormal. We will discuss in greater detail the prevalence of various paranormal and supernatural beliefs. In addition, students will learn about the dangers of unexamined paranormal claims. Lastly, students will be introduced to a strategy known as “reality checking”. This strategy will be used in the remainder of the course to evaluate various paranormal and supernatural claims.

### **QUIZ II**

QUIZ II will cover the previous three sections of the course.

### **REALITY CHECKING: ARE SOURCES RELIABLE?**

Reality checking starts with the question, “Are the sources reliable?” In this section students will learn some ways to evaluate the quality of sources for claims of the paranormal and supernatural and how to use that information to determine the likelihood that such a claim is true or not.

### **REALITY CHECKING: IS THE LOGIC VALID?**

The next step in reality checking is to evaluate the validity of the claims core logic. In this section students will learn the basics of logic and how to use this information to evaluate the logical validity of paranormal and supernatural claims.

### **REALITY CHECKING: ARE CLAIMS BASED ON SCIENTIFIC OBSERVATION?**

The third step in reality checking involves asking the question, "Are claims based on scientific observation". Students will learn how to tell the difference between science and pseudoscience by looking for certain key differences between them. Various examples will be discussed.

### **QUIZ III**

QUIZ III will cover all of the material from the previous three sections.