Course Description: The overall objective of the course is to broaden students' perspectives through a series of lectures and interactive sessions. Specifically, a blend of probability, philosophy and scientific inquiry with mindfulness practice and common sense will be used to develop a rational and research-backed understanding of ourselves and our interconnectedness with all things. Students will practice mindfulness techniques at home and in the classroom throughout the course.

Instructor: Alan Dabney, Ph.D.; Associate Professor; Department of Statistics.

Meeting Times and Location: MWF 12:40-1:30pm in Blocker 448.

Guest Lecturers:
- Daniel Conway, Ph.D.; Professor; Department of Philosophy.
- Donnalee Dox, Ph.D.; Associate Professor; Department of Performance Studies.
- Joshua Hicks, Ph.D.; Associate Professor; Department of Psychology.
- Mary Meagher, Ph.D.; Professor; Department of Psychology.
- Ryan Pittsinger, Ph.D.; Psychologist; Student Counseling Services.
- Srividya Ramasubramanian, Ph.D.; Associate Professor; Department of Communications.
- Matt Sachs, Ph.D.; Professor; Department of Biology.
- Lisa Tauerfer, M.A.; Meditation Instructor; Brazos Healing Center.
- Kim-Vy Tran, Ph.D.; Associate Professor; Department of Physics and Astronomy.

Prerequisites: None.

Learning Objectives:
- Learning Objective 1: Apply probabilistic, scientific and rational reasoning to skillfully interpret and respond to claims and beliefs.
- Learning Objective 2: Engage in respectful discussions and discourse on difficult topics including the individual's responsibility in choosing how to live his or her life and the impermanence and interconnectedness of all things.
- Learning Objective 3: Know oneself by using a combination of mindfulness practice, journal writing and self-tracking of relevant variables that measure various aspects of one's health, wellness, mood and attitude.
- Learning Objective 4: Identify ways in which cultural upbringing affects one's outlook on life and attitude towards others.
- Learning Objective 5: Be able to explain the rational and scientific case for tolerance.
- Learning Objective 6: Be able to explain the concept of "love" as being the desire for and willingness to contribute to good things for one or another.
- Learning Objective 7: Explain the relationship between the quality of one's life and how one manages one's attention in the moment.
• Learning Objective 8: Propose specific, realistic, plausible and short-term action plans at both the individual and group level with which we could passionately, safely and responsibly act optimally out of love.

Course Website: All course materials will be posted on eCampus.

Required Materials:
• There is no required textbook. You will be provided with lecture notes and other materials that will be sufficient to support this course.
• You will need an account with Top Hat. With an account, you will be able to interact with me during class on your phone or laptop. An account costs $24 for 4 months or $36 for 12 months.

Other Materials:
• I will at times use the R statistical software to demonstrate a concept from probability and statistics. You will not be required to use R in this course. If you are interested, the R software can be freely downloaded here. A good beginner's resource is The R Cookbook by Paul Teetor; an electronic version of this book is available on the TAMU library website.
• Optional supplemental reading / viewing / listening:
  o David Hand. The Improbability Principle. Farrar, Straus & Giroux.
  o Sam Harris. Free Will. Free Press.
  o Sam Harris. The End of Faith. W.W. Norton.

Assignments and Grades:
• Pre-Class: Before each lecture, you may be required to view a short video or read a short article and complete a simple quiz on its contents.
• In-Class: Attendance and participation is required at each lecture; see below for accommodations due to university-excused absences. Assessment will be conducted in class through your Top Hat submissions in response to questions asked live by me. At times, guided breathing exercises will be conducted in the classroom. During these sessions, it is expected that all cell phones and other personal devices be turned off.
• Homework: You will be required to complete several homework assignments, at both the group and individual level.
• Project: You will be required to propose specific, realistic, plausible and short-term action plans at both the individual and group levels with which we could passionately, safely and responsibly act optimally out of love at the end of this semester. Optional weekly project discussion sessions will be led by Dr. Dabney via evening web conferences. At the end of the semester, the class will vote to select a single project proposal to implement. Dr. Dabney will then lead the group in putting the selected project into action in the final week of class. Your project grade will be assessed based on (i) the quality of your submitted individual- and group-level proposals, (ii) peer assessment of your participation within the project team to which you were assigned, (iii) participation in the group implementation of the project.

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<th>Percentage</th>
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<tr>
<td>10%</td>
<td>Pre-Class (Online)</td>
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<td>30%</td>
<td>In-Class Participation</td>
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<td>Homework</td>
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Assessments by Learning Objectives: For each Group Assignment below, your group will submit a single written report based on their project and a separate document in which they review and assess the other groups' reports. Individual participation within his / her group will be assessed by anonymous survey of fellow group members. In-Class Assignments will be assessed via Top Hat questions asked live. All written reports should use 12-point font and 1-inch margins.

• Learning Objective 1:
  o LO 1 Assignment 1 (Group): Use basic probability principles to critically respond to specific examples of improbability, "coincidence" and fantastical claims. Submit a 2-page written report.

• Learning Objective 2:
  o LO 2 Assignment 1 (In-Class): Enact a scripted conflict between two individuals with unfalsifiable and incompatible beliefs, objectively discuss and assess the interaction and its likely ramifications, and propose solutions to the conflict.

• Learning Objective 3:
  o LO 3 Assignment 1 (Individual): Record daily self-tracking data, apply appropriate statistical techniques, and write a 2-page (including 1 page for figures) summary report.
  o LO 3 Assignment 2 (Individual): Participate in regular mindfulness sessions both in the classroom and at home. In your journal, record daily minutes spent in mindfulness, and comment on your mindfulness experiences.

• Learning Objective 4:
  o LO 4 Assignment 1 (Group): Critically evaluate specific examples of commonly-held but unproven and unfalsifiable beliefs held by modern cultures, including your own. Submit a 2-page written report.

• Learning Objective 5:
LO 5 Assignment 1 (Group): Discuss and describe ways in which humans constitute a "superorganism", with each individual unavoidably relying on others for their health and well-being. Submit a 1-page written report.

LO 5 Assignment 2 (Individual): Choose from a list of hypothetical characters from cultures and / or other childhood experiences that are foreign to your own, and write a brief autobiography of the individual. In the autobiography, include discussion of the individual's worldview and how it compares with your own, from the hypothetical character's perspective. Submit a 1-page written report.

- Learning Objective 6:
  - LO 6 Assignment 1 (Group): Survey the many differing definitions of "love". Compare the Greek word agape with other definitions of love. Describe specific examples of ways agape love could be employed with respect to one's self, a friend, a family member, a stranger, an enemy, and a non-human sentient being. Submit a 1-page written report.

- Learning Objective 7:
  - LO 7 Assignment 1 (Individual): Read *Zen and the Art of Motorcycle Maintenance* by Robert Persig. Submit a 2-page written report on Persig's use of the word "quality".
  - LO 7 Assignment 2 (In-Class): Discuss specific examples, both religious and secular, of mindfulness practices that are associated with positive individual and collective outcomes.

- Learning Objective 8:
  - LO 8 Assignment 1 (Individual): Submit 1-page written proposal for how you as an individual could optimize the quality of your life through loving mindful action.
  - LO 8 Assignment 2 (Group): Review all proposals, vote on one to adopt, and submit a 2-page written report that expands on and further develops the proposal selected by the group.
  - LO 8 Assignment 3 (Individual): Participate in the final selected action plan during the last week of classes.

**Diversity Assessments:**

- Periodically throughout the semester, Top Hat will be used to ask questions that pertain specifically to diversity. These data will be analyzed by the course coordinators to investigate the distribution of attitudes and how they potentially change over the course of the semester.

**Attendance:**

- Attendance is required in order to earn the In-Class Participation points. University-excused absences (http://student-rules.tamu.edu/rule07) will be accommodated. If a lecture must be missed, a make-up session with me must be arranged as soon as possible.

**Schedule:**
• **Weeks 1-3**: Uncertainty, probability, and improbability: There is uncertainty at the most fundamental levels all around us. Probability is a mathematical theory for working with random things. An improper understanding of probability and statistics can lead to many pitfalls, including: the gambler's fallacy; the prosecutor's fallacy; selection bias; and how many "improbabilities," like a person being struck by lightning multiple times, can be explained by rethinking the assumptions behind the probabilities we are using. Tips on thinking "probabilistically," on interpreting published claims, using common sense ultimately to decide whether and how strongly to believe an apparent lesson learned.
  
  o **Week 1**:
    - Lecture 2: An introduction to mindfulness through controlling one's breath. **Guest**: Tauferner.
    - Lecture 3: The science and uncertainty of origins. **Guest**: Tran.
  
  o **Week 2**:
    - Lecture 1: Quantum mechanics and uncertainty. LO 5 Assignment 2 due.
    - Lecture 2: Probability: definition(s) and basic properties.
    - Lecture 3: Computer simulations to illustrate real-world probabilities.
  
  o **Week 3**:
    - Lecture 1: Improbability: coincidences and probability models. LO 1 Assignment 1 due.
    - Lecture 3: Bayesian learning: combining beliefs with data to modify one's understanding; the important role played by guessing in the learning process.
  
• **Weeks 4-5**: Insignificance, impermanence, and interconnectedness: A brief review of our current scientific and rational understanding of the universe and our roles in it leads to some humbling conclusions about our insignificance. Furthermore, we can see and experience for ourselves that nothing in this life is permanent or lasting. What science has to say about the joint role played by genetics and environment in the characteristics of people, particularly people who we may feel are different from us in some way.
  
  o **Week 4**:
    - Lecture 1: The size and age of the observable universe; the infinitesimal role of an individual human being. **Guest**: Sachs.
    - Lecture 2: The nature of all things: physical material, e.g. atoms, organized in a particular way at a particular moment.
    - Lecture 3: Duality and indeterminism: the dual nature of, e.g. light, with both atomistic and field-based characteristics; the implications to humans; is there a "self"?
  
  o **Week 5**:
• Lecture 1: Darwin and evolution.
• Lecture 2: The role of genetics and environment. Do humans really have free will?
• Lecture 3: Impermanence and interconnectedness.

• Weeks 6-8: Discussion of the "absurdity" of life and its implications to our modern society. A brief survey of Western philosophy, from Socrates to Sartre. Discussion of the existentialist idea that "existence precedes essence" and its implication that our only "self" is the one that we create through our moment-to-moment choices. A brief review of psychology. The science of happiness.
  o **Week 6:**
    • Lecture 1: The "absurdity" of life. LO 2 Assignment 1 in class. LO 5 Assignment 1 due.
    • Lecture 2: Responses to absurdity: hedonism; "herd" behavior and "bad faith"; anxiety, depression and mental illness.
    • Lecture 3: The role of fundamentalist adherence to inherited and untestable beliefs in fostering interpersonal and intercultural conflict.
  o **Week 7:**
    • Lecture 1: Introduction to existentialism and the idea that "existence precedes essence." Guest: Conway.
    • Lecture 2: Nietzsche: the "will to power," the "Übermensch" and the importance of passion in self-realization.
    • Lecture 3: Sartre and Camus; *The Myth of Sisyphus* and the power of presence.
  o **Week 8:**
    • Lecture 1: The roots of modern psychology: Freud on "mindfulness".
    • Lecture 2: Socrates, Plato and Aristotle and the roots of "rational" thought.
    • Lecture 3: The science of happiness: savor, be thankful, aspire to noble goals, be generous and be empathetic to the plight of others as well as your own.

• Weeks 9-11: An Eastern influence: Mindfulness. Nothing ever happened in the past; it happened in some present moment. Nothing will ever happen in the future; it will or won't happen in the moment. If we constantly seek pleasurable experiences for ourselves and try to avoid un-pleasurable experiences, we can never achieve peace. By choosing to be fully present in each moment, not resisting its circumstances within reason, we can more skillfully manage ourselves and navigate our experiences. Scientific research is now uncovering a wide variety of ways in which practicing mindfulness can bring substantial benefits to our health and wellness. Furthermore, a mindful perspective enables what we might call "advanced common sense" through which inclusive, compassionate and loving attitudes and actions spring forth naturally.
  o **Week 9:**
    • Lecture 1: The story of Siddhartha Gautama.
    • Lecture 2: A brief history of Buddhism and comparison with Western religious traditions. Guest: Dox.
- Lecture 3: Introduction to meditation and mindfulness. **Guest:** Ramasubramanian.
- **Week 10:**
  - Lecture 1: The science of mindfulness. LO 7 Assignment 2 due. **Guest:** Meagher.
  - Lecture 2: Mindfulness discussion and activities.
  - Lecture 3: Mindfulness and mental health. **Guest:** Pittsinger.

- **Week 11:**
  - Lecture 1: Mindfulness and interconnectedness.
  - Lecture 2: Common conceptions of "good" and "evil" and their relationships with the philosophy of "no-self". **Guest:** Hicks.
  - Lecture 3: "Advanced common sense": how a mindful approach leads to inclusive, compassionate and loving attitudes.

- **Weeks 12-14:** The optimized self: A rational, reasonable and research-backed proposal can be made that the self is optimized by mindfully choosing how to respond in the moment, conditional on the setting and one's abilities and disabilities, with the intention of maximizing the "quality" of that moment (and hopefully contributing substantially to the cumulative lifetime quality) for you and for all, and this outcome follows naturally when we are motivated by "love," or the desire for and willingness to contribute to good things, for you and for all.

- **Week 12:**
  - Lecture 1: Pirsig and "quality". LO 7 Assignment 1 due.
  - Lecture 2: From "character" to "quality".
  - Lecture 3: Techniques for improving quality, to include: passion, presence, discipline and delayed gratification.

- **Week 13:**
  - Lecture 1: "Love": wanting and contributing to good things for one. LO 6 Assignment 1 due.
  - Lecture 2: Proposal: a person's quality (with respect to both self and others) is maximized by choosing loving things to do in the moment.
  - Lecture 3: Know Thyself: Exploration of our self-tracking datasets together in the JMP software; bring your laptops.

- **Week 14:**
  - Lecture 1: Project discussion. LO 3 Assignment 1 due. LO 8 Assignment 1 due.
  - Lecture 2: Project discussion. LO 8 Assignment 2 due.
  - Lecture 3: Conclusion. LO 3 Assignment 2 due. LO 8 Assignment 3 enacted.

**STATEMENT ON DISABILITIES:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability
Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

**STATEMENT ON PLAGIARISM:** The handouts used in this course are copyrighted. By “handouts”, I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission. As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, consult the latest issue of the Texas A&M University Students Rules, under the section “Scholastic Dishonesty”.

**ACADEMIC INTEGRITY STATEMENT:** “An Aggie does not lie, cheat, or steal or tolerate those who do.” (http://aggiehonor.tamu.edu)