Honors 308-01: Consciousness and Cognition

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Office: Crean 201  Office Hours: Mo/We 5:30 – 6:45

The human brain is a miracle of nature – it is, as far as we know, the only hunk of matter in the universe that can reflect upon its own existence. Get ready for an adventure as we use our consciousness to understand consciousness (how meta)!

GENERAL EDUCATION:
This course is approved to satisfy Social Inquiry and Values and Ethical Inquiry general education (GE) requirements, the learning outcomes of which are copied below.

- Social Inquiry Learning Outcome: Students identify, frame and analyze social and/or historical structures and institutions in the world today.
- Values/Ethics Inquiry Learning Outcome: Students articulate how values and ethics inform human understanding, structures, and behavior.

BOOKS:
- Recommended:

COURSE DESCRIPTION:
How is it possible that in a universe made of mindless atoms following physical laws, some of those atoms have the capacity to produce a first-person, subjective, conscious experience of the world? How can a hunk of biological tissue produce an “inner life” of thoughts, perceptions, and feelings? In short, how does mindless matter become mind? The existence of consciousness is a profound scientific mystery and our inability to explain it is arguably the biggest gap in our scientific understanding of reality.

In this class, we will take both a first-person (introspection) and third-person (objective study) approach to understanding consciousness. Our investigation will be interdisciplinary, drawing on material from philosophy, psychology and neuroscience, cognitive science, and artificial intelligence. The course will be organized around the following major questions from each discipline:

- Philosophy: What is consciousness, and why is it a problem? How should we view the relationships between physical reality, matter, and consciousness? Do we have a conscious, free will?
- Ethics: What role does consciousness play in determining right and wrong? To what extent do ethical principles depend on the existence and/or nature of consciousness?
- Psychology and neuroscience: How do my conscious experiences of thinking, perceiving, feeling, and remembering relate to the physical processes going on in my brain and nervous system? To what extent are we conscious of our actions and decisions? Can consciousness exist without a “self”?
- Cognitive Science: What is the relationship between cognition and consciousness? Is consciousness a function of information processing? Is consciousness necessary for intelligent behavior?
- Artificial Intelligence: Is consciousness a feature of biological matter or can it be “substrate independent” (i.e., can a machine be conscious)?
COURSE CONTENT LEARNING OBJECTIVES

• Develop an interdisciplinary understanding of consciousness that integrates knowledge from disciplines such as philosophy, psychology, neuroscience, and/or computer science/artificial intelligence.
• Critically evaluate both scientific and philosophical arguments and/or theories about consciousness.
• Consider the ontological, epistemological, and ethical issues surrounding the creation of artificial minds (e.g., robots and machine consciousness).
• Become better acquainted with your consciousness through first-person reflection and discussion.
• Develop your own views on consciousness.

COURSE FORMAT: Each class will focus on a particular concept or problem in the study of consciousness. There will be minimal lecturing -- the course is primarily discussion-based. Class attendance and participation is required. I want to hear what you think!

GRADES: Student grades will consist of class participation, presentation, consciousness labs, reading checks, and final project. Each category is described in detail following the point distribution.

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<th>Points</th>
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Participation (250 points)
This course will employ a dialectical approach to understanding consciousness. We will examine the issues together, in discussion. By engaging in an active exchange of ideas, we get the benefit of each others’ unique context of knowledge and values. Thus, I want (NEED! 😊) you to feel comfortable thinking out loud & sharing your ideas in class. The success of the class truly relies on the quality and frequency of student participation.

• To get a perfect participation score you must make at least one comment and ask one question during every class meeting.
• You will be graded not only how often you contribute to class, but on how pertinent and insightful it is to the conversation at hand.
• Participation is a large part of your grade (25%) and should not be taken lightly.

Presentation (250 points) Students (in pairs) will present on a consciousness topic of your interest and lead the class discussion on the issue. You should aim to have students i) understand the issue(s) within that topic and ii) critically evaluate argument/evidence you present. Signups for the presentation topics will happen online at the start of the semester.

• I strongly encourage you to meet with me before your presentation for help, direction, advice, etc.
Consciousness Labs (15 points each x 8 labs = 120 total)
For a first-person study of consciousness, we will have 8 Consciousness Labs over the semester (15 pts each). Each CS Lab asks you to reflect on question(s) about your consciousness and will relate to current course material. The goal is to explore your conscious experience and observe how it evolves as you begin to pay more attention to it.

Reading Questions (10 points each x 8 = 80 point total)
Each week there will be Reading Questions (RQ’s) on the assigned readings posted on Blackboard. The goal is to help you understand the important points so we can have interesting and informed discussions and also to help me identify what (if anything) you may need extra clarification on. You only need to turn in 8 RQ assignments, so you have choice as to which ones you want to turn in for credit.
- Each reading question should be answered in a just a few sentences or a short paragraph.
- Late submissions will be accepted at my discretion, but do not abuse the privilege!
- As stated above, you can turn in any 8 RQ assignments for credit.

Final Creative Project
Demonstrate what you learned in the course by producing a scholarly or creative work that conveys an interdisciplinary analysis of a consciousness-related topic or issue. You can use whatever medium you prefer. Your project may illustrate or explain a particular view on consciousness, compare and contrast views, interpret a concept or problem, argue for a particular philosophical position, anything!
- If you choose to make or perform an art piece, you must also submit a roughly one-page paper (single-spaced) explaining what you are trying to convey with your artwork (you do not need to do this if you choose to do a scholarly/expository paper).
- You can work together! You may collaborate with another student(s) to make one piece of art, however each student must write their own one-page explanation and clearly indicate what their contributions were. In this case, all student collaborators must be listed on each students’ paper.

COURSE SCHEDULE. The readings are listed on the date they are due. PDF’s of readings will be provided on Blackboard. Subject to change with notice. Note that the Blackmore chapters are from the 2nd edition of the book. See post on BB with any corrections.

Philosophical problem(s) of consciousness
8/26 Introductions
8/28 Blackmore Ch 1
  Descartes (selections from The Meditations on First Philosophy)
9/2 NO CLASS (Labor Day)
Blackmore Ch 2
Searle (excerpt from Minds, Brains, and Science)
9/4 Consciousness Lab 1 due 9/4
  Nagel – What is it like to be a bat?
  Chalmers (section 1 and 2 from Facing up to the Problem of Consciousness)
9/9 Churchland (Hornswaggle problem)
  Chalmers (section 3 - 6 from Facing up to the Problem of Consciousness)

Theories of consciousness
9/11 Blackmore Ch 3
9/16  WE WILL MEET IN MICHAEL SHERMER’S CLASS (DeMille 148)

9/18  Consciousness Lab 2  due 9/18
    Blackmore Ch 4
    Dennet – Illusionist theories (Video)

Neuroscience and Psychology – functional neuroanatomy, neurophysiology, psychopharmacology, neuroscience theories of consciousness

9/23  Blackmore Ch 5
    Blackmore Ch 6

9/25  Consciousness Lab 3  due 9/25
    Blackmore Ch 10

9/30  Blackmore Ch 11

10/2  Blackmore Ch 12

10/7  Crick & Koch (brief selections)
    Tononi (Integrated Information Theory)
    McQueen (Does Consciousness Cause Quantum Collapse?)

10/9  NO CLASS (University closes at 4p)

The Self and freedom of the Will

10/14  Blackmore Ch 7, 8

10/16  Blackmore Ch 9
    Libet article

10/21  Consciousness Lab 4  due 10/21

Animals and the evolution of consciousness

10/23  Blackmore Ch 13, 14

10/28  Consciousness Lab 5 due 10/28
    Blackmore 15

Artificial Consciousness

10/30  Blackmore 16
    Star Trek The Next Generation: Measure of a Man

11/4  Blackmore 17, 18
    Searle (excerpts from Minds, Brains, & Science)
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The Paranormal
11/6 Blackmore 19
11/11 Blackmore 20, 21
Consciousness Lab 6 due 11/11

Altered states of consciousness
11/13 Blackmore 22
11/18 Blackmore 23
11/20 Blackmore 24

THANKSGIVING BREAK!

12/2 Consciousness Lab 7 due 12/2
Blackmore Ch 25, 26

12/4 Sam Harris (selections from Waking Up)
Blackmore Ch 27
Consciousness Lab 8 (begin in class, can turn in 12/9)

12/9 (4:15 – 6:45p) Final project presentations

ACADEMIC INTEGRITY POLICY:
Chapman University is a community of scholars which emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work, and academic dishonesty of any kind will not be tolerated anywhere in the university.

EQUITY AND DIVERSITY POLICY:
Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in Chapman’s Harassment and Discrimination Policy: http://tinyurl.com/CUHarassment-Discrimination. Any violations of this policy should be discussed with the professor, the Dean of Students and/or otherwise reported in accordance with this policy.

STUDENTS WITH DISABILITIES POLICY:
In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Disability Services Office. The Disability Services Office will work with the appropriate faculty member who is asked to provide the accommodations for a student based on the documentation and the individual student needs. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.