Philosophy of Psychology and Neuroscience

PHL 363

Fulfills department major/minor and Neuroscience minor

Semester/Year: Fall 2025
Meeting Days & Times: MW 9:30am – 10:48pm
Location: Murphy Center 002

Instructor's Name: Dr. Gregory Nirshberg
Email: gnirshberg@iona.edu
Office Hours: MW 3:30pm – 4:45pm (and by appointment)
Office Location: Spellman Hall, 2nd Floor (across from Hyne's Institute)

Course Description

This course is intended to introduce students to theoretical and philosophical issues raised by the cognitive sciences. The first part of the course will cover foundational topics in the philosophy of cognitive science, including the history and theoretical commitments of the cognitive sciences, with an emphasizes on the two dominant families of views on the nature of cognition: computationalism and connectionism. We will also cover more recent research programs that challenge these two dominant paradigms (and the representational commitments which underpin them): embodied cognition, dynamicism and enactivism. In the rest of the course, we will explore various "narrower" debates in the cognitive sciences: consciousness, free will, cognitive penetrability of perception and memory. Along the way, we will ask questions about whether, and to what degree, philosophy, neuroscience and psychology can and should inform each other.

Contact Information

Please email me at the address listed above. I check my email regularly and will do my best to respond within 24 hours (often much quicker than that), but if you don't hear back from me within those 24 hours, email me again as a reminder. If you have a conflict with my office hours, email me and we can set up an appointment for an alternate meeting time. I'm happy to accommodate!

Course Student Learning Outcomes (SLOs)

Upon successful completion of this course, students are expected to...

Course SLO Narrative	Supports Core SLO # and Narrative	Method(s) of Course SLO Assessment
Students will engage and critically examine fundamental issues regarding the nature and understanding of the human mind and brain from an empirical perspective.	Through engagement with "big questions" grounded in the liberal arts, students will demonstrate knowledge of the meaning and complexities of the human experience and its relationship to the natural world.	Midterm, Papers, Online Discussion, Prepared Questions
Students will demonstrate an ability to employ reason and argumentation, both in discussion and individual analysis, to evaluate claims and answer questions about philosophical issues that arise in the cognitive sciences.	Through immersion in a nurturing community dedicated to intellectual engagement, students will demonstrate the skills needed to thrive as citizens and prospective leaders in an ever-changing world. 2A: Critical Thinking 2B: Written Communication 2C: Oral Communication	Midterm, Papers, Online Discussion, Prepared Questions, Class Discussion, In Class Writing

Required Texts/Source Materials
Mindware: An introduction to the philosophy of cognitive science by Andy Clark (2nd edition, 2013)
All other readings and material (including any material handed out in class) will be posted to Blackboard.

Grading Criteria & Assessment Information

In Class Journal	20%
Expert of the Day	15%
Conversation Starter	10%
Online Discussion	25%
Assignments	30%

The following is a breakdown of the various requirements which determine your grade for the course. **All assignments will be posted to, and submitted via, Blackboard.**

In Class Journal (ICJ)
At the end of each class lecture, I will ask students to reflect on the day's material and discussion and a) say something thoughtful about what they took away from the day and b) raise a critical point or clarificatory question about the day's discussion/content. Students will not be graded on correctness, but on "thoughtfulness." I will drop the lowest three grades. This means that students can miss up to three lectures, no questions asked, and your ICJ grade will not suffer at all. Each journal entry will end up being equivalent to roughly 1 point of your semester grade.

Expert of the Day (EotD)
TWICE during the semester, each student will be asked to come to lecture and function as our Expert of the Day on the day's reading. Details about this assignment, and a schedule, will be posted on Blackboard. Briefly, students will be expected to be able to summarize the day's reading and have

prepared a few questions and critical points about the reading. The Expert of the Day will also be required to submit a writeup on Blackboard by midnight the night before the relevant class. Your grade on this assignment will be split between your in-class contribution and your Blackboard submission, with more details to be found on Blackboard. Each EotD assignment will be worth 7.5% of your semester grade.

Conversation Starters and Online Discussion (OD)
There will be weekly online discussions throughout the semester. Each student will be required to be a Conversation Starter for these online discussions TWICE throughout the entire semester. Expectations for Conversation Starters will be posted on Blackboard, but students can think of these as basically mini-blog posts, focused on reflecting on the content from the previous week and raising questions about it, connecting it to their individual fields of study, or exploring related questions we did not have a chance to explore in class. Each student will be required to make two response posts to the Conversation Starter's original post. I will drop your lowest two OD grades at the end of the semester. Meaning, you can skip two online discussions entirely and it will not hurt your grade. Each Conversation Starter post will be worth 5% of your semester grade, and each response post will be worth roughly 1.25% of your semester grade.

Assignments
You will have 5-6 very short "take home" assignments throughout the semester. These assignments are an opportunity for students illustrate their acquisition of the relevant conceptual knowledge from our course, as well as an opportunity to develop and illustrate their critical thinking abilities, developing analyses of our texts and supporting their claims using both philosophical principles and empirical evidence. Depending on the exact number of assignments, each individual assignment will end up being worth either 5% or 6% of your semester grade.

Final Grades will be calculated using the following grading scale
I also will not impose a curve on any individual assignment, or your final grades.

Letter Grade	Grade Point and Grade Scale	Description
A	4.00 93-100	*Outstanding.* Signifies the highest level of achievement in the subject and indicates an exceptional general competence, and exemplary comprehension and interpretation skills. Work is devoid of errors, and reflects a highly nuanced understanding of disciplinary concepts.
A-	3.67 90-92	*Excellent*. Signifies an advanced level of achievement approaching the highest category. Work contains a few minor errors, but reflects a mastery of disciplinary concepts.
B+	3.33 87-89	*Very Good.* Signifies a consistently high level of achievement and indicates that the course requirements have been fulfilled in an intelligent, superior manner. Work contains some minor errors, but reflects a near mastery of disciplinary concepts.
B	3.00 83-86	*Good.* Signifies a complex engagement with disciplinary content, and well-developed critical skills. Work contains several minor, but no significant errors.
B-	2.67 80-82	*Above Average.* Signifies a more than acceptable degree of disciplinary knowledge and skills. Work contains some significant and some minor errors.
C+	2.33 77-79	*Satisfactory.* Signifies consistent achievement of a quality that satisfies, and sometimes exceeds stated, basic requirements. Work contains significant errors and patterns of error, but reflects an acceptable degree of disciplinary knowledge and skills.

Letter Grade	Grade Point and Grade Scale	Description
C	2.00 73-76	*Fair.* Signifies achievement of a quality that satisfies the stated, basic requirements of coursework, and a functional, though incomplete understanding of disciplinary concepts.
C-	1.67 70-72	*Poor.* Signifies a level of understanding below the basic level expected of students. Work contains many errors, including patterns of error, and reflects only partial understanding of disciplinary concepts.
D	1.00 60-69	*Minimal Passing.* Signifies a level of understanding well below the basic level expected of students. Work is consistently riddled with errors and patterns of error, and reflects only a minimal understanding of disciplinary concepts.
P		*Passing.* Signifies satisfactory completion of course requirements and the earning of credit without quality points.
U		*Unsatisfactory.* No quality points assigned.
F	0.00 0-59	*Failure.* Signifies failure to meet basic course requirements.
FA		*Failure - Excessive Absence.* Signifies dismissal from a course for unacceptable academic performance and absence from 20 percent or more of the scheduled class sessions. Requests for this grade are filed by the faculty member with the dean of the school in which the student is enrolled. This grade is computed as an "F" in the cumulative index.
I		If for serious reasons, students are unable to complete one or more requirements of a course, including the final examination, students may apply for an "Incomplete grade" by filling out the "Incomplete Request" form on Gaels 360. If the instructor grants the request, the instructor will file an "Incomplete grade student plan" with the student and the dean's office within 48 hours of an "incomplete grade" being submitted. The student will have up to 3 weeks from the date that grades are due for a semester to complete all outstanding work unless the instructor specifies an earlier date. Please refer to the Academic Information page in the catalog for complete details.
W		*Withdrawal.* Signifies withdrawal from a course with permission of the Academic Advising Office or appropriate academic dean.
H		*Audit.* Signifies that a course was not taken for credit.
SP		*Satisfactory Progress.* Signifies that a course is not complete as of the end of the present semester, but is continuing.

Instructor's Course Policies & Procedures

Class Etiquette

The use of cell phones is prohibited in class. The use laptops will be tentatively allowed. Laptops *can* sometimes be used effectively. It allows you to have readings right in front of you. It allows you to quickly look up words and concepts. You can take notes more quickly. Etc. But they are also incredibly distracting. In my experience, most students use their laptops in class for everything *but* notetaking, leading to less engagement and poorer performance, and often distracting those sitting around them. However, even for those that use their laptops mostly to take notes, there is strong evidence that notetaking on laptops at best does not help student performance, and at worst actively harms it. Please use your laptops thoughtfully, and for their intended purposes.

Late Work Policy

In Class Journal entries cannot be made up. Expert of the Day assignments can only be made up if you reach out to me in advance of your due date and work out an alternate arrangement with me. Online

Discussion conversation starter cannot be made up. Late responses posts will incur a 50% penalty. You will have a three-day grace period on your midterm. After that, you will incur a 10-point penalty per day. I will do my best to grade late Final Papers. If I run out of time before grades are due, you will earn a 50% on your final paper, no matter how good it may have been.

University Policy for all courses and students

[full explanations of policy may be found in the University Catalog]

Cheating and Plagiarism

Cheating and plagiarism subvert both the purpose of the University and the experience students derive from being at Iona. They are offenses which harm the offender and the students who do not cheat. The Iona community, therefore, pledges itself to do all in its power to prevent cheating and plagiarism, and to impose impartial sanctions upon those who harm themselves, their fellow students, and the entire community by academic dishonesty. Faculty members will report all incidents of cheating and plagiarism to the dean. Every effort will be made to insure justice in any allegation of intellectual dishonesty. Educational assistance rather than adversarial proceedings may be sought. Sanctions may include failure for the assignment, failure for the course, and in the case of a second instance or an egregious violation of ethical and professional standards, dismissal from the University. Students who have been guilty of plagiarism or academic dishonesty at any point in their Iona academic career do not qualify for degrees with honors. If, in conformity with this policy, a sanction is imposed, students may appeal first, to the professor who discovered the offense; second to the department chair; and third to the academic dean of the division involved. The decision of the academic dean is final. A student has the right to appeal the academic dean's decision to the provost if, and only if, the sanction involves a suspension from class or dismissal from the University. In such appeals, the decision of the provost is final.

Iona University AI Use Policy (March 2024)

Courses at Iona University may allow the use of generative artificial intelligence tools (such as ChatGPT/GPT-4, Gemini etc) at the discretion of the professor. Professors who allow the use of generative AI tools in their courses must state it explicitly in their syllabus and indicate the following: which AI tools students may use; which assignments they may be used for; and how students may use them.

Students may not use generative AI tools towards the completion of any course assignment unless its use is permitted in the course syllabus. Unauthorized uses of generative AI tools will be treated as instances of academic dishonesty. Students who use generative AI in courses where it is permitted are responsible for their submission and should be aware of the following issues with generative AI tools:

- AI generated materials may infringe on materials that have copyright protection and/or are the intellectual property of others.
- Students may not enter any confidential, identifiable, or sensitive materials into an AI tool as this not only violates confidentiality rules but, in some cases, particularly in the Health Sciences, may also violate HIPAA rules.
- Students should be aware that generative AI often provides inaccurate information. Students are expected to check AI output for factual errors and incorrect information.

Attendance

All students are required to attend all classes. Iona has an attendance policy for which all students are accountable. While class absence may be explained it is never excused. Professors may weigh class absence in the class grade as they see fit. Failure to attend class may result in a failure of the class for attendance (FA),

when the student has missed 20% or more of the total class meetings. The FA grade weighs as an F would in the final official transcript.

e-mail Communication

All students are required to use their assigned Iona email accounts for all University-related business including electronic correspondence between students and faculty. Students are advised to check their Iona email account on a regular basis.

Appeal of Assigned Grade

Students who believe that an error has been made in the assignment of a grade should discuss with the instructor the basis upon which the grade was determined. If, after this review of the grading criteria for the course and the student's performance in it, the student is not satisfied with the assigned grade, an appeal may be made to the department chair. Such appeal must be made in writing, stating the basis upon which the grade is questioned and requesting a departmental review. If, following the review, the student is not satisfied with the departmental decision; final appeal may be made to the academic dean of the department involved. FA excessive absence grades are awarded as a matter of policy and may not be appealed.

Course and Teacher Evaluation (CTE)

Iona University now uses an on-line CTE system. This system is administered by an outside company and all of the data is collected confidentially. No student name or information will be linked to any feedback received by the instructor. The information collected will be compiled in aggregate form by the agency and distributed back to the Iona administration and faculty, with select information made available to students who complete the CTE. Your feedback in this process is an essential part of improving course offerings and instructional effectiveness. We want and value your point of view. You will receive several emails at your Iona email account about how and when the CTE will be administered with instructions on how to proceed.

Iona University Accessibility Statement

Iona University is committed to creating an inclusive and accessible learning environment for all students. If you have been approved for accommodations by the Accessibility Services Office (ASO) and are experiencing any physical or academic barriers based on disability or the way the course is designed, please let me know immediately so that we can discuss appropriate adjustments and/or additional accommodations.

If you received accommodations (e.g. extended time for tests) in high school, and would like to receive similar support at Iona, you must first meet with an ASO staff to discuss your needs. Once your accommodations are approved, the Office will provide me with a list of your accommodations. Information about your disability is never shared with your instructor, only your accommodations.

To schedule a meeting with the ASO staff, you can send an email to Access@Iona.edu or complete a request for accommodation online by logging on to the Single Sign-On page and going to the ACCOMMODATE app. Once complete, a staff member from the Accessibility Services Office will contact you to schedule a meeting.

Course Outline
The below schedule is tentative, and subject to change. I will inform the class of any changes in lecture and by posting an announcement on Blackboard.

PART 1: FOUNDATIONS OF COGNITIVE SCIENCE: RESEARCH PROGRAMS
In this first part of our course, we will explore various research programs in the cognitive sciences that attempt to offer theoretical explanations for the relationship between mental states and brain states. We will begin with classical approaches (computationalism and connectionism) and move on through more contemporary, controversial and radical approaches (dynamicism, embodied cognition, enactivism and predictive coding). Before delving into these research programs, we will make a brief foray into the history of philosophy of mind and the representational theory of mind (which is fundamental in cognitive science).

January 15th	Introduction to the philosophy of cognitive science and philosophy of mind
January 22nd	Tim Crane, Excerpts from *The Mechanical Mind* on mental representation
January 27th	Mindware: Ch. 2 - Symbol Systems (Part 1: Sketch)
January 29th	Mindware: Ch. 2 - Symbol Systems (Part 2: Discussion)
February 3rd	Mindware: Ch. 4 – Connectionism (Part 1: Sketch)
February 5th	Mindware: Ch. 4 – Connectionism (Part 2: Discussion)
February 10th	Mindware: Ch. 5 - Perception, Action and the Brain
February 12th	Mindware: Ch. 6 - Robots and Artificial Life
February 17th	PRESIDENT'S DAY: NO CLASS
February 19th	Mindware: Ch. 7 – Dynamics
February 24th	TBD
February 26th	BUFFER DAY

PART 2: TOPICS IN THE PHILOSOPHY OF COGNITIVE SCIENCE
We will spend the rest of the semester exploring specific topics within the philosophy of cognitive science.

CONSCIOUSNESS
Can neuroscience explain consciousness? Or is consciousness outside the bounds of neuroscientific explanation? What, if anything, can philosophers learn from the neuroscience of consciousness?

March 3rd	Francis Crick and Christof Koch, "Consciousness and Neuroscience"
March 5th	Koch, et al, "Neural correlates of consciousness: progress and problems"
March 10th	Hakwan Lau, "Are we studying consciousness yet?
March 12th	Hakwan Lau, "Theoretical motivations for investigating the neural correlates…"
March 17th	SPRING BREAK: NO CLASS
March 19th	SPRING BREAK: NO CLASS
March 24th	Jesse Prinz, "A Neurofunctional Theory of Visual Consciousness"

March 26th   David Chalmers, "Facing up to the problem of consciousness"

March 31st   BUFFER DAY

TOP-DOWN PROCESSING/COGNITIVE PENETRATION
Do our beliefs and other cognitive states not only influence how we *interpret* what we see, but literally influence our *perceptual experience* of the world?

April 2nd   Masrour, et al, "Revisiting the empirical case against perceptual modularity" Part 1

April 7th   Masrour, et al, "Revisiting the empirical case against perceptual modularity" Part 2

April 9th   BUFFER DAY

FREE WILL
Does neuroscientific research regarding the explanation for our decisions and volitional action threaten our deeply held convictions that our actions are freely willed? Should neuroscientific research affect our judgments of moral and legal responsibility?

April 14th   Burns and Swerdlow, "Right Orbitofrontal Tumor with Pedophilia Symptom…"
             Desmurget, et al, "Movement Intention After Parietal Cortex Stimulation in Humans"

April 16th   Benjamin Libet, "Do We Have Free will?"

April 21st   EASTER MONDAY: NO CLASS

April 23rd   Radiolab: Blame

April 28th   Adina Roskies, "Neuroscientific challenges to free will and responsibility"

April 30th   TBD

May 5th   BUFFER DAY