

Instructor	<b>Dr. Amy Hunter</b> (she/her pronouns)
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Office hours	Feel free to send a Teams chat or video meeting message any time during office hours – I’d be happy to meet with you!

### Course Description (from the University Catalogue)

This course will explore the intersection between religious experiences and neuropsychology. We will discuss what the fields of neuroscience and theology can learn from each other based on current research on the neurobiology of religious experiences. This class will meet your CORE/Signature 3 requirement and will also count as a psychology elective.

This course will provide us with the opportunity to delve into research in a specific sub-area of Biopsychology, broadly referred to as the neuroscience of religion or neurotheology. I developed this class years ago but haven’t had the chance to teach it for the past 10 years or so, and I’m very excited to do so this semester! I’ve spent the past few months updating the reading list and am happy to see how much more research has been published in that time. I’ve attempted to design a course that will not only help you understand some of the research in this area but also give you the opportunity to reflect on this material and its applicability to your own life.

I consider this class to be a place where all of us will be treated with respect, and I welcome individuals of all beliefs, ethnicities, genders, gender identities and expressions, national origins, sexual orientations, abilities, and other visible and nonvisible differences. It is our differences that enrich our experiences, and all members of this class, including me, are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class. (adapted from Dr. Lloyd)

### Course Objectives

Upon successful completion of this course, you should be able to:

- Articulate the basics of neuroscience, including the anatomy of the nervous system, synaptic transmission, and psychopharmacology
- Define “neurotheology”
- Describe the research on the brain structures, neurochemistry, and genetics implicated in religious experiences
- Explain how this knowledge can inform our understanding of religious experiences
- Explain how these findings can impact and be understood by different religious traditions
- Explain different viewpoints on the integration of neuroscience and theology
- Articulate your own perspective – informed by the work of others – on the appropriate relationship between neuroscience and theology

The first objective will be assessed through quizzes, while the rest will be assessed through writing assignments, class participation, and a research update presentation (described below).

### Class Format

Our first few course meetings will essentially be a “crash course” in Biological Psychology. If you have already taken that course, this will be a review. If not, this will get you up to speed for the material to come in this course. The remainder of the semester will be conversation (aka discussion)-based: we’ll spend each class period discussing a reading assignment. One of the primary factors that affects the success of this class is your willingness to participate in class conversations. I’ll do my best to facilitate that, but your participation during our class meetings is essential.

### Course Materials (required)

Newberg, A. (2018). *Neurotheology: How Science Can Enlighten Us About Spirituality*. NY: Columbia University Press.

Other readings are listed in the course outline and will be placed on the course Canvas site.

Technology: Course page in Canvas

### Opportunities to Demonstrate What You've Learned (that is, grading)

**Quizzes:** To check your understanding of the biopsychology-related content covered during the first few weeks of the semester, there will be 4 open-book quizzes in Canvas due after each class period. Quizzes will be due at noon on **Sept 6, Sept 11, Sept 13, and Sept 18**. *Quizzes will count as 20% of your semester grade.*

**Writing Assignments:** Thinking and asking questions about the readings is essential for effective discussion during our class meeting times. To facilitate this, either a *reaction paper* or *conversation questions* will be due for each reading assignment, with the exception of the chapters in unit 1 (see course outline for details).

*Conversation questions* (CQs) are due each day. These should be 3 to 5 substantive questions or comments on the reading. By substantive, I mean asking a thoughtful question, connecting this material to information you've learned in other courses or your own life, asking questions that are likely to spark a conversation, etc. Simply asking a yes/no question or asking for definitions does not constitute a substantive question. Unless otherwise noted, CQs are due for each reading separately – that is, if there are two readings on a given day, you should submit 3 to 5 CQs for each reading. Because the purpose of CQs is to facilitate class discussion, they are due at the start of each class and cannot be submitted late.

I will grade CQs using the following scale:

2 points	1 point	0 points
Clearly articulated questions/comments that would likely spark discussion	Assignment submitted, but questions/comments unclear and/or unlikely to spark discussion	Not submitted

There will be a total of 19 CQs due this semester. I will drop your lowest 2 grades; this includes any assignments not submitted. *CQs will count as 20% of your semester grade.*

*Reaction papers* (RPs) are due for each unit of course content (due dates are on the course outline at the end of the syllabus). These should include a summary of the author's main argument as well as your thoughtful and original analysis of and reaction to the reading. The *summary* portion of the reaction paper should be no more than 500 words in length and should explain the author's main argument(s). Your *reaction* to the reading should be the lengthiest section of the paper (at least 750 but no more than 1500 words) and should include your response to the reading. It should include answers to some or all of the following questions: Does the author make a convincing argument? Why or why not? What evidence was provided to support that argument? What additional information would have been more persuasive? What questions are still unanswered? Does this information support or refute other class material? Has your understanding or thinking about the topic changed as a result of this reading? How does this reading relate to your own personal experiences? Because the purpose of the RPs is to facilitate class discussion, they are due at the start of each class and cannot be submitted late.

I will use the following rubric when grading RPs:

4 points	3.5 points	3 points	2 points	1 point	0 points
Exceptionally comprehensive and thoughtful	Comprehensive and thoughtful	Somewhat comprehensive and thoughtful	Somewhat comprehensive or somewhat thoughtful	Not comprehensive or not thoughtful	Not comprehensive and not thoughtful OR no submission

There will be a total of 5 RPs due this semester. I will drop your lowest grade; this includes any assignments not submitted. *RPs will count as 20% of your semester grade.*

There are no opportunities for re-writes of individual assignments; all the available points for an assignment are gained or lost when you submit it. However, you should use the feedback I give you on one assignment to improve the next. If I give you feedback that you don't understand or aren't sure how to implement, please reach out and I will be glad to explain.

**Participation:** These points will come from two sources: your daily *class participation* and a *participation log*.

*Class participation:* On conversation (not lecture) days when you also have CQs due, I will use the following rubric to determine class participation:

Points	Performance criteria
2	Student volunteers with answers and questions; student typically moves discussion forward by responding to others' comments; contributions reflect careful reading of assignments
1	Student infrequently volunteers; contributions reflect either superficial reading of the assignments or do not relate to assignments
0	Student does not contribute to class discussion

I will drop your lowest 2 grades; this includes any dates you are not present. *Class participation will count as 15% of your semester grade.*

*Participation log:* Part of your participation grade will come from your participation log, which includes your careful reflection of your own participation behaviors (Docan-Morgan, 2015). A template for the log can be found on our Canvas page. Logs are due on the following dates: Sept 25 (covering Sept 18 & 20); Oct 25 (covering Sept 25 – Oct 23); Nov 20 (covering Oct 25 – Nov 15); and Dec 14 at 9am (covering Nov 20 – Dec 11). I'll provide feedback on your participation logs within a week of their due date. This assignment will develop your own metacognitive awareness of your communication skills and help you determine where your current skills lie and areas that may benefit from improvement. These will be graded using the same rubric as reaction papers. *Participation logs will count as 10% of your semester grade.*

[Docan-Morgan, T. (2015). The participation log: Assessing students' classroom participation. *Assessment Update*, 27, 6-7.]

**Research update:** In preparing for this class I've realized how much research has been done in this area recently. Even given an entire semester we only have time to cover a fraction of the current research in the field. The research update assignment is your opportunity to choose an article in the area of neuroscience of religion that's of interest to you and explain it to the rest of the class in a brief (approx. 10 min) presentation. Research updates are scheduled for **November 13 and 15**. To ensure that multiple students aren't presenting the same article, please submit 3 possible articles to me (rank ordered) no later than **October 25**. Specific directions will be available in Canvas. *The research update will count as 15% of your semester grade.*

### General guidelines for all assignments:

- Summarize concepts *in your own words*. I understand that paraphrasing complex material is difficult, but I can't assess whether or not you understand a concept unless you use your own words to explain it. Taking someone else's text and rearranging the words or replacing every few words with a synonym isn't paraphrasing. At best, that is considered lazy writing, but most people – myself included – consider it plagiarism. Remember that the purpose of the assignments is to provide you with an opportunity to show me what you've learned. Rearranging someone else's words or substituting a few words doesn't demonstrate that you understand the material.
- Related to this, *don't include information you don't understand*; for example, don't include the details of procedures or statistical tests (e.g. F or p values) unless you can explain them.
- Assignments should reflect mastery of the course material; it should be clear that you understand what you are writing about and have a firm grasp of course material.
- Assignments should be substantive; while occasionally a short answer will suffice, if I ask you to "explain" or "describe" something, your response should be thoughtful and detailed
- Use APA format, which includes:
  - Typed, double-spaced
  - All margins are 1 inch
- Standard font style and size (e.g. Times Roman, Arial, or Calibri, 10 or 11 point font)

- **Cite your sources** in the body of the paper and include a **reference page** (in APA format) at the end if you cite anything other than the assigned readings. Note that you need to *cite anything that isn't common knowledge*, including information presented in lectures or from the textbook. When in doubt, cite it! Having too many citations is better than not having enough.
- Proofread carefully for grammar and spelling.
- You are permitted to use quotes in your writing assignments, but use them sparingly. The goal of these assignments is to explain the source material in your own words and describe your thoughts and reactions to it. Extensive use of quotes doesn't demonstrate that you have learned or understand the material.
- *Carefully read and follow the information in this syllabus on plagiarism (below).*
- Double-check that you've **followed all the directions** here and on the assignment itself.

For a great explanation of the basics of APA style, check out the [Purdue Online Writing Lab](#). For directions on how to cite lecture notes (which are considered a "personal communication"), look [here](#).

**A note on plagiarism:** Plagiarism is the act of taking ideas, writing, etc. from another and passing them off as one's own. It includes quoting or even paraphrasing without citation, *as well as substituting synonyms into someone else's text and then retyping it or simply rearranging the order of words*. You should cite anything that isn't common knowledge; not doing so also constitutes plagiarism. Using web pages marketed as "plagiarism checkers" that re-write text for you is also plagiarism and will result in a grade of zero.

**\*\*Plagiarism includes quoting without appropriate citation – that is, quoting without placing the quoted material in quotation marks and without a citation at the end of the sentence. Follow the four-word rule: if 4 or more words in a row are the same as the original source without quotation marks, it's plagiarism.\*\***

If you have any questions about what constitutes plagiarism, please see the APA Publication Manual or ask me before an assignment is due. *I take plagiarism very seriously*, and I expect that you will as well.

**Returning graded work:** I strive to grade all assignments within a week of submission.

**Deadlines:** Unless otherwise specified, all in-class assignments are due as indicated above and on the course outline at the end of this syllabus. I won't accept late assignments. I will drop your lowest RP and CQ scores, as described above, which would include any RPs or CQs that aren't submitted. I am happy to answer any assignment-related questions, but please give me enough time to respond such that you can still submit your assignment on time.

**Final Course Grades:** Letter grades will be calculated using the following department-wide scale:

Percent	Letter Grade
93 and up	A
90-92.99	A-
87-89.99	B+
83-86.99	B
80-82.99	B-

77-79.99	C+
73-76.99	C
70-72.99	C-
67-69.99	D+
60-66.99	D
59.99 and below	F

If you are struggling in this course or concerned about your grade, please see me and I will be happy to assist you! In addition, free tutoring for this and all Psychology courses is available through Psi Chi – just e-mail [psichiclub@shu.edu](mailto:psichiclub@shu.edu) to request assistance. In the interest of fairness and using the same rules for everyone, **these cutoffs are firm and I do not round semester grades**. Don't ask me to give you an extra assignment to raise your grade or to round up your grade – I will not do so under any circumstances.

### Strategies for Success

Based on my own teaching experiences and comments from students in prior semesters of this course, here are my top 5 strategies for your own success and the success of the class as a whole:

1. **Keep up with the assigned readings.** Particularly if you haven't taken a course in Biological Psychology or Human Neuroscience, much of the introductory material will likely be new to you. If you read the material before class you'll have a much better understanding of the initial lectures and help contribute to discussion later in the semester. The remaining readings will vary in their level of difficulty, but do your best and reach out if you have questions.
2. **Start thinking about the research update assignment early in the semester.** This assignment is an opportunity for you to choose a topic in the field that interests you and to delve into it more deeply, but it requires planning ahead. You may find that your first (or even second) choice of articles isn't feasible, so leave yourself plenty of time for literature searching. If you need help, I'm happy to assist you - please ask!
3. **Be open minded and respectful of others' opinions.** Each of us has unique and personal opinions of religion that are shaped by our individual experiences. Some of you may have very strong religious beliefs (across a variety of faiths), some may be atheists, and some unsure of their beliefs. Keep in mind that (1) not everyone has the same beliefs as you and (2) we can all learn from each other.
4. **Think of our class meetings as a chance for conversation among colleagues.** I will spend very little time lecturing this semester. My goal in this course is to help facilitate conversations during class time, but I can't make good discussion happen single-handedly. This class works best when everyone is actively engaged and participating, thinking about, and responding to others.
5. **Maintain a positive attitude.** As you can tell from the course outline, this course is likely to be challenging. The conversation-based format may be different from other classes you've taken. Some of the topics may take you a bit out of your comfort zone. However, I have worked hard to create a course that I believe is interesting, unique, thought-provoking, and worth the work. Maintaining a positive attitude will go a long way in enhancing everyone's experience this semester.

### Policies and Procedures

**Pronouns/Preferred Names:** I will gladly honor your request to address you by the name and pronouns consistent with your identity. Please advise me of this early in the semester if your preferences are different than my class roster, or feel free to tell me of any changes throughout the semester.

**Mask wearing:** The full-time faculty members of the department of Psychology have voted to allow individual instructors to create their own policies regarding mask wearing in their classes. In this class, masks are *optional* for students who are feeling well and have no known COVID exposure within the past 7 days. However, masks are *required* for anyone who is feeling unwell (even if it's not COVID) or recently been exposed to someone with COVID. Consistent with Seton Hall and department policy, I reserve the right to require masks for the entire class should COVID rates on campus or in the surrounding community increase.

**Attendance:** Although attendance is not mandatory, you need to attend class to earn points for participation. It is also to your advantage to attend all class meetings to facilitate your understanding of and engagement with course material. You are responsible for all material covered in class whether you are present or not. I understand that missing a class is sometimes unavoidable, and there's no need for you to inform me about any absences. If you miss a class, it is your responsibility to get any missed information from a fellow student. However, I will be happy to answer any questions once you have made the effort to find out what you've missed. Please note that remote attendance via Teams is not available in this class.

**Cancelled classes:** In the case of a cancelled class, please check your SHU e-mail for information and updates.

**Etiquette:** Please make every attempt to **be on time** for class. I would prefer that you arrive late instead of not at all, but plan ahead for logistical problems that are bound to occur. Please don't ask me to fill you in on whatever you may have missed or expect me to slow down so you can catch up; you can get missed information from your classmates after class.

**Electronics/Technology:** Please **put your cell phones away** – far away, out of sight, so as not to be tempted – during class. Research shows that people are nowhere near as good at multitasking as they think they are, and checking your phone

during class will certainly distract you and detract from your learning. It's also not conducive to maintaining an atmosphere of conversation and is rude to whomever is speaking at the time.

Similarly, **using your laptop** for anything other than class related purposes is highly detrimental to your learning and that of others around you. There's now an abundance of empirical evidence to demonstrate this – which I am happy to share if you're interested – but here's the bottom line: *laptop multitasking has detrimental effects on the person engaged in the behavior **and** people in view of their screen, who are also distracted.* While I might be persuaded by the argument that it's your tuition dollars and you should be allowed to waste them if you want, I cannot ignore the negative effect on the students around you. The success of this class depends heavily on conversation and active engagement with other students, and focusing on your computer screen (or cell phone) impedes your ability to engage with the rest of us.

So here's how this will be implemented in this class: if I see you checking your phone during class (and you haven't previously discussed with me that you're expecting an emergency call/text), I'll ask you to put it away. If I notice that you're using your laptop for non-class related purposes – believe it or not, it's pretty easy for me to tell – I'll first reach out after class to ask that not occur again. However, if it happens repeatedly I'll remind you personally of the policy during class. I don't do these things because I'm an egomaniac who demands your complete attention every second of class, but because part of my job is to create a classroom environment that maximizes everyone's learning.

I will respond to **e-mails** as soon as possible and almost always within 48 hours or less (not counting weekends). However, please do the following:

- Use a greeting (e.g. Hi Dr. Hunter), a signature (e.g. Best, Your Name), and proper grammar and punctuation throughout. E-mailing – even if you're just sending me an attachment such as an assignment – is a formal means of communication. Don't send a blank e-mail with an attachment.
- Check the syllabus to see if your question is answered there before e-mailing.
- Give me specific information in the subject line, such as “exam 2” or “writing assignment question.” *E-mails with no subject line are automatically deleted* by my e-mail program, and e-mails with vague subject lines such as “important” or “help” often go straight to the junk mail folder, where I won't see them for days.
- Check your inbox to see if I have responded before asking “Did you get my e-mail?”

You are welcome to reach out to me via **Teams chat**, but please don't send duplicate messages in email and Teams chat; that only delays my response as it produces multiple messages to which I need to respond.

**Psychology department policy on incompletes:** Incompletes can only be given when the following criteria are met:

- An unforeseen and documented event occurs that prevents a student from completing the remaining course requirements during the semester. This documentation must be reviewed and approved by the course instructor.
- A student has completed at least 75% of the assigned coursework.
- A student is passing the course at the time of the request.
- The completion plan is in alignment with [university guidelines](#).

Incomplete grades not resolved within one academic year will convert to a grade of F. Incompletes cannot be used to avoid a bad grade or as a substitute for withdrawing; students are responsible for seeking help in a timely manner and for being aware of withdrawal deadlines.

**Canvas page:** I will post lecture outlines, most reading assignments, participation log templates, your grades, and reminders of upcoming assignments on Canvas. Please submit assignments through Canvas. Check the page regularly and make sure e-mail from Canvas is going to your inbox, not your spam folder. Due to the way in which I calculate grades and Canvas's technological limitations, the grade column may not be accurate; if you have questions about your grade, please ask and I will be happy to help.

## **Psychology Department Policy on Academic Honesty**

**I. Statement** – The Department of Psychology will not tolerate any form of academic dishonesty. Infractions will be appropriately penalized; students should understand that suspension or expulsion from the University is a possible result.

**II. Definitions** – “Academic dishonesty” shall be understood to encompass *at least* the following:

*Cheating* – whether on tests or on other course assignments, whether by the giving, receiving or taking of information. Additionally, turning in the same paper for two different assignments is cheating.

*Plagiarism* – stealing and/or passing off as one’s own the ideas or words of another; using without crediting the source. Includes (1) copying of text/research/assignments; (2) using someone else’s papers/research/assignments without permission and citation; (3) representing as one’s own work what is really the work of another person. This includes downloading from web sources. Students are responsible for understanding proper crediting procedures; unintentional plagiarism is still academic dishonesty.

### **III. Penalties**

1. A student determined to be cheating on any test or who plagiarizes on a course assignment will be appropriately penalized at the discretion of the instructor. This may include receiving a zero on the assignment or “F” for the course.
2. Notice that a student has cheated or plagiarized will be sent to the department of the student’s major. All cases of plagiarism resulting in an “F” for the course will be reported to the Dean. This can result in a recommendation to the Dean for suspension or expulsion from the university.
3. If the chair of the Psychology department finds that a student who has declared a major or minor in Psychology or is a graduate student in Psychology has been found to have committed acts of academic dishonesty in more than one Psychology course, the student is expelled from the Psychology program after due notice of the discovery. After one year, the department may rescind the expulsion upon the application of the student provided the student evinces a genuine, informed, and vigorous commitment to academic integrity to the satisfaction of the department’s Academic Integrity Committee.
4. All department or instructor actions resulting from suspected violations of this policy will be taken in accordance with the student’s due process rights. Nothing in this policy statement shall be construed to preclude the department from taking appropriate disciplinary action against forms of academic dishonesty not stipulated here.

I try my best to be a reasonable person, but I can appear unreasonable about some things. Cheating – which includes plagiarism – is one of those things. In this course, cheating includes, but is not limited to, the following behaviors:

- Copying, attempting to copy, and/or aiding another in the copying of answers from exams or assignments
- Use of unauthorized materials during a quiz
- Collaborating on assignments, including quizzes and writing assignments. Students may discuss assignments, but the work that each student turns in must be their own original work.
- Submitting an assignment for this class that you wrote and/or submitted for a different class. All work must be original for this class.
- Plagiarism of writing assignments. Please read carefully the definition of plagiarism above – you are responsible for making sure that all your work conforms to this definition. If you have any questions about what constitutes plagiarism, please ask me before an assignment is due.
- Use of any form of generative artificial intelligence (AI) unless explicitly permitted in the assignment directions.

The penalty for a first offense of cheating of any kind will be, at minimum, a zero on the exam or assignment. The penalty for a second offense will be an automatic F in the course. As per Psychology department policy, any instance of cheating will be reported to the department chairperson.

**Title IX Statement:** Seton Hall University faculty are committed to supporting students and upholding the University's [Policy Against Sexual Misconduct, Sexual Harassment and Retaliation](#). Under Title IX and this Policy, sexual misconduct, domestic violence, dating violence, and/or stalking in all forms is prohibited. If you experience such an incident, we encourage you to report it. *While you may talk to any of your faculty members about such an incident, please understand that as "Responsible Employees" of the University, faculty members MUST report what you share to SHU's Title IX Coordinator.* If you wish to speak to someone confidentially, please contact the confidential resources listed below; they can connect you with support services and help you explore your options. Confidential resources are: any professional staff members of [Counseling and Psychological Services](#) or [Health Services](#) acting in their professional roles, or members of the clergy who are acting in their roles as counselors. (adapted from the University of Mary Washington)

**Disability Services Statement:** I am happy to work with students to implement accommodations – please reach out to me early in the semester so we can discuss how I can best assist you. It is the policy and practice of Seton Hall University to promote inclusive learning environments. If you have a documented disability you may be eligible for reasonable accommodations in compliance with University policy, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and/or the New Jersey Law against Discrimination. Please note that students are not permitted to negotiate accommodations directly with professors. To request accommodations or assistance, please self-identify with the Office for Disability Support Services (DSS), Duffy Hall, Room 67 at the beginning of the semester. For more information or to register for services, contact DSS at (973) 313-6003 or by e-mail at [DSS@shu.edu](mailto:DSS@shu.edu).

**Mental Health Resources:** If you are experiencing mental distress, please contact the [Counseling and Psychological Services \(CAPS\)](#). CAPS is located on the second floor of Mooney Hall, Room 27. Their regular business hours are Monday-Friday, 8:45 AM-4:45 PM. To explore confidential support options, call Counseling and Psychological Services (CAPS) at (973) 761-9500 and/or connect with [Campus Ministry @shucampusministry](mailto:CampusMinistry@shucampusministry). CAPS also has self-help resources available online, including guided meditations, self-help videos, and app recommendations (such as [Nod](#)—free downloadable app for SHU students to help build social connections). More information can be found [here](#). There is also a 24-hour emergency number for SHU students having a psychological emergency: (973) 275-HELP (4357). The [988 Suicide & Crisis Lifeline](#) (formerly known as the National Suicide Prevention Lifeline) offers 24/7 call, text and chat access to trained crisis counselors who can help people experiencing suicidal, substance use, and/or mental health crisis, or any other kind of emotional distress. People can also dial 988 if they are worried about a loved one who may need crisis support. Finally, the American Psychological Association has provided tools related to managing stress related to COVID-19 that can be accessed [here](#). In addition, SHU is partnering with Uwill, a telehealth online platform that students can easily access to speak with a counselor for 30-minute virtual sessions. Students can choose a counselor based upon their preferences of availability, gender, language, ethnicity, and focus area. Students can also choose a time that fits their schedule with day, night, and weekend availability. To access Uwill, you can [make an account here](#) with your SHU email and choose a therapist based on your preferences, or you can go to the [CAPS website](#) to learn more.

### American Psychological Association (APA) National Curricular Objectives

The APA recommends that Psychology course offerings in departments across the country address specific curricular objectives, with the overarching goal that a student majoring in Psychology will have each item covered in at least one course during their undergraduate career. Below is the list of the goals recommended by the APA; the curricular objectives addressed by this course are italicized. By evaluating this information for each of your Psychology courses, you will be able to see how your undergraduate courses complement each other and gain perspective on the information and skills you are acquiring as a Psychology student.

<b>Goal 1. Knowledge Base of Psychology</b>
1.1 <i>Describe key concepts, principles, and overarching themes in psychology.</i>
1.2 <i>Develop a working knowledge of psychology's content domains.</i>
1.3 <i>Describe applications of psychology.</i>
<b>Goal 2. Scientific Inquiry and Critical Thinking</b>
2.1 <i>Use scientific reasoning to interpret psychological phenomena.</i>
2.2 <i>Demonstrate psychology information literacy.</i>
2.3 <i>Engage in innovative and integrative thinking and problem solving.</i>
2.4 Interpret, design, and conduct basic psychological research.
2.5 <i>Incorporate sociocultural factors in scientific inquiry.</i>
<b>Goal 3. Ethical and Social Responsibility in a Diverse World</b>
3.1 <i>Apply ethical standards to evaluate psychological science and practice.</i>

3.2 Build and enhance interpersonal relationships.
3.3 Adopt values that build community at local, national, and global levels.
<b>Goal 4. Communication</b>
4.1 <i>Demonstrate effective writing for different purposes.</i>
4.2 Exhibit effective presentation skills for different purposes.
4.3 Interact effectively with others.
<b>Goal 5. Professional Development</b>
5.1 Apply psychological content and skills to career goals.
5.2 <i>Exhibit self-efficacy and self-regulation.</i>
5.3 Refine project-management skills.
5.4 Enhance teamwork capacity.
5.5 Develop meaningful professional direction for life after graduation.

**COURSE OUTLINE** (all dates are approximate and are subject to change)

	Date	Reading Due	Assignment Due (RP = reaction paper; CQ = conversation questions)
<b>Unit 1</b>	<b>Introduction to neuroscience, neurotheology</b>		
	<i>Part 1: Introduction to Neuroscience:</i> Some basics on the neurobiology of behavior		
	8/28	Wikipedia entry on “neuroscience of religion”	
	8/30	Kalat, <i>Biological Psychology</i> -Chapter 1: Nerve Cells and Nerve Impulses	Bring lecture outline (posted on Canvas) Quiz due 9/6, noon
	9/4	Labor Day – no class	
	9/6	Kalat, <i>Biological Psychology</i> -Chapter 2: Synapses	Bring lecture outline Quiz due 9/11, noon
	9/11	Kalat, <i>Biological Psychology</i> -Chapter 3: Anatomy and Research Methods	Bring lecture outline Quiz due 9/13, noon
	9/13	Carlson, <i>Foundations of Behavioral Neuroscience</i> -Chapter 4: Psychopharmacology	Bring lecture outline Quiz due 9/18, noon
	<i>Part 2: Introduction to Neurotheology:</i> What is “neurotheology”? What religious experiences have been investigated with respect to neurological functioning?		
	9/18	Newberg, <i>Neurotheology</i> -Chapter 1: Neurotheology and the Happy Prison of the Brain	CQ
	9/20	Newberg, <i>Neurotheology</i> -Chapter 3: Neuroscience and Neurotheology	CQ for chapter, RP for Newberg chapters 1 and/or 3
<b>Unit 2</b>	<b>The neuroscience of religious and spiritual experiences</b>		
	<i>Part 1: Brain Structures and Religious Experience:</i> What brain structures are activated during religious/spiritual experiences? Does the pattern of activation change based on how we conceptualize God? How does knowledge of the involved brain structures inform our understanding of religious experience?		

9/25	Newberg & Waldman, <i>How God Changes Your Brain</i> -Ch. 3: What Does God Do to Your Brain? -Ch. 6: Does God Have a Heart?	CQ for each chapter Participation log 1 due
9/27	Kapogiannis, D., Barbey, A.K., Su, M., Krueger, F., & Grafman, J. (2009). Neuroanatomical variability of religiosity. <i>PLoS ONE</i> , 4(9), e7180. DOI: 10.1371/journal.pone.0007180	CQ
10/2	Newberg, <i>Neurotheology</i> -Chapter 8: Brain Pathology and Religion	CQ
10/4	Newberg, <i>Neurotheology</i> -Chapter 11: Religious and Spiritual Practices	CQ
10/9	<b>Fall Break!</b>	
10/11	Newberg & Waldman, <i>How Enlightenment Changes Your Brain</i> -Ch. 6 The Spectrum of Human Awareness	CQ
10/16	Davidson, R.J. et al (2003). Alterations in brain and immune function produced by mindfulness meditation. <i>Psychosomatic Medicine</i> , 65, 564-570. DOI: 10.1097/01.PSY.0000077505.67574.E3 Moyer, C.A. et al (2011). Frontal electroencephalographic asymmetry associated with positive emotion is produced by very brief meditation training. <i>Psychological Science</i> , 22(10), 1277-1279. DOI: 10.1177/0956797611418985	CQ for each article
10/18	Newberg, A.B., Wintering, N.A., Yaden, D.B., Waldman, M.R., Reddin, J., Alavi, A. (2015). A case series study of the neurophysiological effects of altered states of mind during intense Islamic prayer. <i>Journal of Physiology</i> , 109, 214-220. <a href="http://dx.doi.org/10.1016/j.jphysparis.2015.08.001">http://dx.doi.org/10.1016/j.jphysparis.2015.08.001</a> Newberg, A.B., Wintering, N.A., Morgan, D., & Waldman, M.R. (2006). The measurement of regional cerebral blood flow during glossolalia: A preliminary SPECT study. <i>Psychiatry Research: Neuroimaging</i> , 148, 67-71. DOI:10.1016/j.pscychresns.2006.07.001	CQ for each article
10/23	Ferguson, M.A., et al. (2016). Reward, salience, and attentional networks are activated by religious experience in devout Mormons. <i>Social Neuroscience</i> , 13(1), 104-116. DOI: 10.1080/17470919.2016.1257437	CQ for chapter, RP for all 5 articles combined
<i>Part 2: Neurochemistry and Religious Experience:</i> What neurotransmitters are involved in religious/spiritual experiences? What happens when those neurotransmitters are manipulated with drugs? Is a spiritual experience induced by drugs (or any other alteration of brain function) different than one which occurs spontaneously? How does this research help us to understand religions in which psychoactive substances are consumed as part of the religious ritual?		
10/25	Newberg & Waldman, <i>How Enlightenment Changes Your Brain</i> -Ch. 3: What Enlightenment Feels Like -Ch. 4: Enlightenment Without God	CQ for each chapter Participation log 2 due Submit 3 possible articles for research update
10/30	Griffiths, R.R., Richards, W.A., McCann, U., & Jesse, R. (2006). Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance.	CQ for each article

		<i>Psychopharmacology</i> , 187, 268-283. DOI: 10.1007/s00213-006-0457-5 Barsuglia, J., et al. (2018). Intensity of mystical experiences occasioned by 5-MeO-DMT and comparison with a prior psilocybin study. <i>Frontiers in Psychology</i> , 9, 2459. DOI: 10.3389/fpsyg.2018.02459	
	11/1	Huels, E.R. et al. (2021). Neural correlates of the shamanic state of consciousness. <i>Frontiers in Human Neuroscience</i> , 15. DOI: 10.3389/fnhum.2021.610466	CQ
	11/6	James, E., Robertshaw, T.L., Hoskins, M., & Sessa, B. (2020). Psilocybin occasioned mystical-type experiences. <i>Hum Pharmacol Clin Exp</i> , 35, e2742. <a href="https://doi.org/10.1002/hup.2742">https://doi.org/10.1002/hup.2742</a>	CQ for chapter, RP for all 4 articles combined
	11/8	Catch-up day	
	11/13, 11/15	<b>Research updates</b>	
<b>Unit 3</b>	<b>Integrating neuroscience and theology</b>		
	<i>Part 1: Successfully integrating science with religion</i>		
	11/20	Consolmagno, <i>God's Mechanics: How Scientists and Engineers Make Sense of Religion</i> Part 1: Why would a techie believe in God? <b>OR</b> Part 2: Why would a techie join an organized religion?	CQ Participation log 3 due
	11/22	<b>Thanksgiving break</b>	
	11/27	Consolmagno, <i>God's Mechanics: How Scientists and Engineers Make Sense of Religion</i> Part 4: Why would a techie be a Christian? <b>OR</b> Part 5: The confession of a Vatican techie	CQ
	<i>Part 2: Alternate interpretations of neuroscientific findings</i>		
	11/29	Newberg, d'Aquili, & Rause <i>Why God Won't Go Away</i> -Chapter 9: Why God Won't Go Away: The Metaphor of God and the Mythology of Science -Epilogue: So Just What is Neurotheology Anyway?	CQ for each chapter
	12/4	Alper, <i>The God Part of the Brain</i> -Chapter 19: The Logic of God: A New "Spiritual" Paradigm -Chapter 20: What, if anything, is to be gained from a scientific interpretation of human spirituality and God?	CQ for each chapter
	<i>Part 3: What is the future of neurotheology?</i>		
	12/6	Jeeves & Brown, <i>Neuroscience Psychology and Religion</i> -Chapter 9: Getting our Bearings: Looking Back and Looking Forward	CQ
	12/11	Catch-up day	RP on any <i>Neurotheology</i> chapter of your choice
	12/14, 9am	Newberg, <i>Neurotheology</i> -Chapter 15: The End of Faith and the Beginning of Neurotheology	RP Participation log 4 due

**A final note:** I've designed this course to the best of my ability and in light of COVID as we understand it at this time. However, circumstances may arise that will necessitate changes in the course. Should that be necessary, I'll communicate with you early

*and often to let you know how our course will be affected. If you have questions at any time, please don't hesitate to reach out.*