

EDEP 6114: COGNITIVE PROCESSES & EDUCATIONAL PRACTICE

(CRN 14798 – SPRING 2025)

Instructor:	Peter Doolittle	Date/Time:	Tuesdays, 7:00-9:50 pm
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Email:	pdoo@vt.edu	Prerequisite:	Graduate Status

PURPOSE

The purpose of this course is to answer three fundamental questions:
How do we think and learn? How do we research cognition? How should we design and teach?

Course Description

Cognitive psychology addresses the processes of how people learn, remember, and think about knowledge, information, and experiences. As such, the cognitive psychology field is broad and encompasses an array of concepts, approaches, frameworks, and theories. The *Cognitive Processes and Educational Practice* course is an advanced and focused course on a subset of these elements and areas. Specifically, the course engages in the relationship between learning, memory, and cognition, with special attention paid to their involvement in educational practice. Beyond these key elements, specific cognitive psychology topics, that arise from student interests, provide a second focus of the course. Ultimately, the course focuses on the relationship between current behavioral, neurological, and educational research with regard to learning, memory, and cognition and the teaching and learning process.

Course Prerequisites: Graduate status.

Learning Goals and Outcomes:

LG1: Students will understand the role that cognitive processing plays in learning, memory, and cognition.

LO1: Students will be able to *explain* the role of cognitive processing and memory to learning and instruction.

LO2: Students will be able to *analyze* learning and instruction for the roles that processing and memory play.

LG4: Students will understand the relationship between cognitive processing and memory and the design of effective instruction.

LO3: Students will be able to *analyze* instructional outcomes for the processing needed to foster the outcomes.

LO4: Students will be able to *create* instructional strategies by applying cognitive psychology tenets.

LG5: Students will understand the research methods used in the empirical studies that support the role of cognitive processing and memory in learning and instruction.

LO5: Students will be able to *explain* the research methods used in empirical studies of human learning, memory, and cognition.

Evaluations

Student performance will be evaluated in three ways: the completion of a series of Reading Responses, the completion of a series of In-Class Daily Primings, and Daily Class Evaluations. The Reading Responses provide an opportunity for students to analyze scholarly writings based on standard research components (e.g., research questions, methods, results, findings, and applications). The In-Class Daily Primings provide an opportunity for students to activate and review core ideas from the reading at the beginning of each class in the form of multiple-choice questions. The Daily Class Evaluations allow students the opportunity to reflect on their learning and provide feedback to the instructor on the conduct of the course. The assignments are delineated in the *Reading Responses*, *Daily Primings*, and *Daily Class Evaluations* handouts.

Grading	Reading Responses	(15 x 200 points)	3000 pts
	In-Class Daily Priming	(15 x 10 points)	150 pts
	Daily Class Evaluations	(14 x 20 points)	280 pts

		B+ 3086-2984 89-87%	C+ 2743-2641 79-77%	F < 2058
A 3430-3224 100-94 %	B 2983-2881 86-84	C 2640-2538 76-74		
A- 3223-3087 93-90	B- 2880-2744 83-80	C- 2537-2401 73-70		

Pedagogy

reading + experiencing + discussing + applying + creating

Attendance Policy and Late Policy

All students are expected to attend class regularly and promptly, and to come prepared to class by having read the day's readings, completed any pre-class assignments, and contemplated the reading's meaning and application. Submitting an assignment late will result in a grade of 0 points unless the late submission was cleared by the instructor in advance of the due date.

Services for Students with Disabilities

Virginia Tech welcomes students with disabilities into the University's educational programs. The University promotes efforts to provide equal access and a culture of inclusion without altering the essential elements of coursework. If you anticipate or experience academic barriers that may be due to disability, including but not limited to ADHD, chronic or temporary medical conditions, deaf or hard of hearing, learning disability, mental health, or vision impairment, please contact the *Services for Students with Disabilities* (SSD) office (**540-231-3788**, ssd@vt.edu, or visit www.ssd.vt.edu). If you have an SSD accommodation letter, please meet with the instructor privately during office hours as early in the semester as possible to deliver your letter and discuss your accommodations. You must give the instructor reasonable notice to implement your accommodations, which is generally 5 business days and 10 business days for final exams.

Mental Health and Well-Being

Supporting the mental health and well-being of students in my class is of high priority to me and Virginia Tech. If you are feeling overwhelmed academically, having trouble functioning, or are worried about a friend, please reach out to any of the following offices:

Cook Counseling

- Schedule an appointment and/or 24/7 crisis support: 540-231-6557
- **ucc.vt.edu** for more information

Dean of Students Office

- General advice: 540 231-3787
- After-hours crisis: 540-231-6411
- **dos.vt.edu** for more information

Hokie Wellness

- **hokiewellness.vt.edu** for more information about health and wellness workshops and consultations
- Virginia Tech Recovery Community: **hokiewellness.vt.edu/students/recovery.html**

Services for Students with Disabilities (SSD)

- Accommodations and other disability-related supports: 540-231-3788
- **ssd.vt.edu** for more information

See a full listing of campus resources on **well-being.vt.edu**

Also, please feel free to speak with me. I will make every effort to work with you; I care about your well-being and success.

Essential Needs

For any student who has difficulty affording groceries, accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and if you believe this may affect your performance in this course, you are urged to contact the Dean of Students office for support at 540-231-3787 or complete an interest form to participate in The Market at Virginia Tech (https://cm.maxient.com/reportingform.php?VirginiaTech&layout_id=15).

The Dean of Students, through The Market at Virginia Tech, offers food options and other resources. There is also a Student Emergency Fund program (<https://dos.vt.edu/emergencyfund.html>). If you are comfortable in doing so, please notify your professor or departmental advisor of your situation. This will enable them to provide any resources they have access to.

Honor Code

The Graduate Honor Code will be enforced within this course. All assignments have a note regarding how the Graduate Honor Code applies to that specific assignment. Students unfamiliar with the Graduate Honor Code are encouraged to read the Graduate Honor System Constitution. Violations of the Graduate Honor Code are divided into four broad categories – cheating, plagiarism, falsification, and academic sabotage (<https://graduateschool.vt.edu/academics/expectations/graduate-honor-system.html>).

Principles of Community

Virginia Tech is a public land-grant university, committed to teaching and learning, research, and outreach to the Commonwealth of Virginia, the nation, and the world community. Learning from the experiences that shape Virginia Tech as an institution, we acknowledge those aspects of our legacy that reflected bias and exclusion. Therefore, we adopt and practice the following principles as fundamental to our on-going efforts to increase access and inclusion and to create a community that nurtures learning and growth for all of its members:

- *We affirm* the inherent dignity and value of every person and strive to maintain a climate for work and learning based on mutual respect and understanding.
- *We affirm* the right of each person to express thoughts and opinions freely. We encourage open expression within a climate of civility, sensitivity, and mutual respect.
- *We affirm* the value of human diversity because it enriches our lives and the University. We acknowledge and respect our differences while affirming our common humanity.
- *We reject* all forms of prejudice and discrimination, including those based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status. We take individual and collective responsibility for helping to eliminate bias and discrimination and for increasing our own understanding of these issues through education, training, and interaction with others.
- *We pledge* our collective commitment to these principles in the spirit of the Virginia Tech motto of Ut Prosim (*That I May Serve*).

Mobile Technologies

Mobile technologies, such as cell phones, tablets, and laptop computers may only be used in class for class related purposes. Please respect your fellow students and the professor by turning off cell phones before class begins and refraining from using computers and tablets during class to check email or social media. There will be time during class breaks to check email and social media.

Cell Phones: Cell phones should be turned off during all classes. It is understood that there may be occasions when you will need to leave your cell phone *on* to receive a phone call of extreme importance. In these extreme cases, please notify the instructor prior to the beginning of the class, have your cell phone set to vibrate.

Tablets and Laptop Computers: Tablets and laptop computers should only be used for legitimate class related purposes (e.g., taking notes, reviewing readings, searching the web for class-based concepts). Please refrain from using these technologies for entertainment purposes during class (e.g., email, movies, music, social media).

Zoom Interface: Zoom may be used to conduct the class synchronously online in the case of snow, pandemic, illness, or some random event of which we are currently unaware. It is requested that you attend a Zoom class with your camera (video) on and your Zoom profile display name set your preferred name (e.g., Peter Doolittle). This is a request only.

Religious and Ethnic Holidays

From the VT website (<https://www.registrar.vt.edu/dates-deadlines/religious-ethnic-holidays.html>):

As a publicly funded institution of higher education, Virginia Tech does not officially recognize religious holidays and celebrations. However, as an institution we recognize the importance of such events in the lives of our community members. In the spirit of inclusive excellence and our Principles of Community, faculty, staff, and students are encouraged to be cognizant of major religious and cultural observances when planning courses and campus events and to be sensitive to potential conflicts.

If you have religious or ethnic holidays that may prohibit or impact your attendance or participation in class, please let the instructor know in advance. While completion of all assignments and understanding of all material will still be required, adjustments to address your needs will be enacted, as possible.

Inclement Weather

In the presence of inclement weather, there are three guidelines related to class cancellation:

1. *University Cancels Class:* VT campus closings due to inclement weather may be obtained by calling the Weather Hotline, (540) 231-6668; tuning to WVTF-FM 89.1 or 91.9; accessing the VT Twitter feed, twitter.com/vtalerts; or, viewing the VT home page, <http://www.vt.edu> or University State page, <https://vt.edu/status.html>. If the university is closed, then we do not have class and I will send the class an email to that effect.
 2. *Instructor Cancels Class:* If the weather is potentially hazardous, and the university is not closed, then I may cancel class myself. If I cancel class, then I will send an email to the class indicating the cancellation no later than 4 pm (although I will try for 12:00 pm) the day of class with the final word regarding whether class will be held.
 3. *Student Misses Class:* If you determine that traveling to campus during inclement weather might be hazardous, then please send me an email indicating that you will not be attending class. Please use your best judgment in making this type of decision – be safe! If you decide not to come to class, based on inclement weather, you are still responsible for any work missed. You can participate in class using Zoom if travel is not an option.
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Course Zoom

There may be a time when you simply cannot make class in person and, thus, must attend class via Zoom. If so, here's the course's Zoom link. That said, you **should not** think of this Zoom link as an option. That is, if you are sitting at home on your couch at 6 pm on a Thursday, with your dog or cat or favorite child, and think "do I want to go to class or should I just Zoom into class," your next thought should be "No!" or "Nein!" or "Немає!" or "Nej!" or "¡No!" or "Het!" or "Não!" or "Geen!" or "不!" or "Non!" or "Οχι!" or "नहीं!" or "Níl!" or "ㄟ ㄟ ㄟ ㄟ !" or "아니요!" or "Minime!" or "ᄇᄇᄇᄇ" or ㄹ

<https://virginiatech.zoom.us/my/doolittle/>

Artificial Intelligence

Artificial intelligence and chatbots, such as ChatGPT, Claude, and Gemini, are tools to be used in productive, creative, and ethical ways. For this course, the use of AI, in any form, is allowed, and even encouraged. If you paraphrase or quote from an AI website or chatbot, cite the sources as you would any other source (e.g., book, article, website) according to APA guidelines:

Reference:

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. <https://chat.openai.com/chat>

In-text citation:

A theory provides an explanation of natural phenomenon that condenses existing empirical findings that can be used for describing, explaining, predicting, and extending knowledge of the natural phenomenon (OpenAI, 2023).

In addition, the use of artificial intelligence within this course must abide by the Honor Code and Principles of Community discussed elsewhere in this syllabus.

Communicating with the Instructor

All students are welcomed and encouraged to communicate with the instructor on issues relating to the course, grading, and special issues. The best way to contact me is in person: before, during, or after class. The second-best way to contact me is via email at pdoo@vt.edu. If you use email and you do not get a response from me in 48 hours, please email me again (I appreciate the reminders!).

Syllabus Change

The syllabus is subject to change by the instructor in the event of extenuating circumstances. All changes will be announced in class and provided to students in writing.

A Final Thought

I'm here to help you be successful – that's my job and desire. If there's something that I can do to help you succeed, please let me know.
