Course Syllabus: PSY260H1S

Course Information

Time: M/W 6:00pm-9:00pm

Location: BL205 Textbook: NA

Prerequisites: PSY100H1 / PSY100Y5 / PSYA01H3 / COG250Y1

Exclusions: PSY360H5 / PSYB45H3 / PSYB38H3

Distribution Requirements: Science

Breadth Requirements: Living Things and Their Environment (4)

Course Instructor

Name: Carolyn Davison (she/her)
E-mail: carolyn.guay@mail.utoronto.ca

Student Drop-in Hours:By appointment on Zoom

Book here: https://calendly.com/carolyn-davison
Meeting link: https://utoronto.zoom.us/j/3531504583

Meeting ID: 353 150 4583

Passcode: 502953

Teaching Assistants

Name: Mateja Perovic

Email: m.perovic@mail.utoronto.ca Student Drop-in Hours: by appointment

Name: Sophia Zhao

Email: sophiayt.zhao@mail.utoronto.ca Student Drop-in Hours: by appointment

Course Description

This course will provide a strong background in the basics of learning. We will examine how behaviours and the brain change with experience in both humans and animals.

Learning Outcomes

By the end of this course, you should be able to:

- Describe basic learning principles
- Critically assess the learning principles involved in novel situations
- Link learning principles with specific psychological disorders
- Connect learning principles to your own life
- Explain how certain types of experiences change the brain

Equity, Diversity, Inclusion, and Justice

The University of Toronto is committed to equity, human rights, and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities. In this, like so many courses, the diversity of perspectives and experiences that members of the learning community bring enrich the experience for everyone, and we must commit to creating an environment where everyone feels safe, comfortable, and welcome.

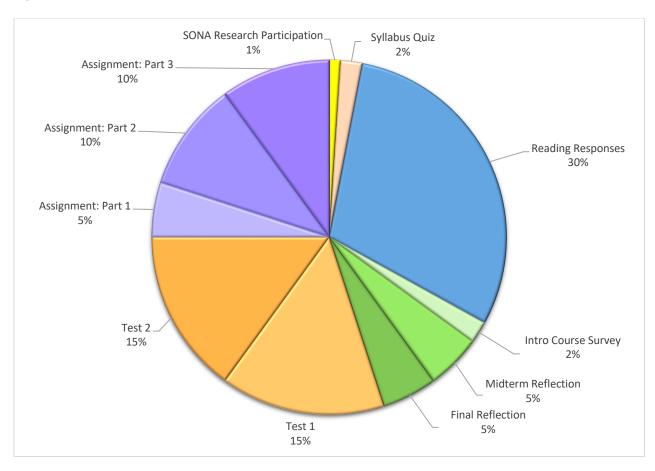
Territorial Acknowledgement

I wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississaugas of the Credit River. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

Grade Breakdown

	Subtotal	Total	Due	
Meta				
Syllabus Quiz	2 %		July 10, 11:59pm	
SONA Participation	1 %		By end of term	
		3%		
Reflections				
 Intro Course Survey 	2 %		July 12, 11:59pm	
 Midterm Reflection 	5 %		July 31, 11:59pm	
• Final Reflection	5 %		End of term	
		12%		
Reading Responses				
• Each Response	3 %		Same day as class, 11:59pm	
		30%		
Tests				
• Test 1	15 %		July 31, 6:10-7:10pm (in class)	
• Test 2	15 %		TBA (during exam period)	
		30%		
Assignment				
• Part 1	5%		July 19, 11:59pm	
• Part 2	10%		August 9, 11:59pm	
• Part 3	10%		August 14, 11:59pm	
		25%		
GRAND TOTAL		100%		

Assignments



SONA Research Participation: 1%

Volunteering as a participant in psychology studies is a great way to get a first-hand perspective on how research is conducted in psychology. It can also be a fun way to learn about and contribute to current research projects being conducted here at UofT.

An alternative assignment can be arranged for those who are unable to participate in a study.

Syllabus Quiz: 2%

Before you gain access to the course modules, you must pass the syllabus quiz with at least 80%. You can take as many attempts as you need. All the answers are somewhere in the syllabus, which you may refer to while you complete the quiz.

This quiz is designed to help you familiarize yourself with the course and learn where you can find relevant information.

Reflections: 12% (Intro Course Survey, Midterm Reflection, and Final Reflection)

Throughout the term, you will have various opportunities to reflect on your learning and goals. There will be some general questions to guide your reflections, but these are ultimately designed to be tools for you and, as such, you are welcome to add or expand on any elements that feel most pertinent to you.

Pedagogically, reflection has been demonstrated to be a critical tool in aiding, framing, and contextualizing learning, which leads to better understanding and retention over time.

Reading Responses (RR): 30%

For each class there will be at least one required reading, as well as supplementary readings if you wish to explore ideas further. For each reading, you will have the opportunity to prepare a brief response to help you collect your ideas and demonstrate that you have read and understood the material. These responses are short (1-2 pages), informal, and should respond to questions from a template that will be provided to you.

You are encouraged to submit the responses earlier rather than later, but they won't accrue late marks until August 18th.

Each reading response is worth 3% of your final grade, up to a maximum of 30%. Every response you submit will automatically earn one point just for completion, and up to two additional points based on the depth of thinking demonstrated. You have the option to submit as few or as many responses as you like. It is up to you which and how many readings you choose to submit responses to, and you are encouraged to use this flexibility to accommodate your schedules.

Note that required readings are still required even if you choose not to submit a response for them. The idea behind these responses is twofold:

- First, and perhaps most obviously, they are designed to encourage you to read and engage with the course text while also *giving you credit* for the reading and thinking work you would be expected to do anyway;
- Second, allocating a portion of your grade to these responses allows me to de-emphasize the weight of exams in this course, rewarding long-term effort over short-term memorization.

Learning Myths Assignment (25%)

Part 1: Identifying Learning Claims

For the first component of the assignment, your task will be to identify five claims or pieces of advice about learning that you would be interested in investigating further. For each claim, you will need to answer a few brief questions. One of these learning claims will form your topic for the remaining parts of the assignment.

Part 2: Research and Reporting

Referring to at least two peer-reviewed research articles, you will write a 3-4 page report that analyzes one of the learning claims you identified in Part 1. Your job will be to use the research to make a compelling case that argues whether or not the claim is likely to be a myth.

Part 3: Science Communication

Using the creative medium of your choice (blog, infographic, video, etc.), you will create a public-facing advisory about the learning claim you studied. If you believe the claim was a myth, you may want to focus on 'debunking' it and describe why the science doesn't necessarily support the claim. If your claim was scientifically supported, you may want to describe a study or two that demonstrate its veracity.

Course Schedule

Date	Class Topic	Assignments	
Wed,	Course Introduction and Syllabus		
July 5			
Mon,	Lecture 1: History of the Study of Learning and Memory	Syllabus Quiz RR: History of the study	
July 10	Required reading:		
	Will et al., 1985	of learning and memory	
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Wed,	Lecture 2: Neuroscience of Learning and Memory	Intro Survey RR: Neuroscience of	
July 12	Required reading:	learning and memory	
Man	Kennedy, 2016	,	
Mon,	Lecture 3: Nonassociative Learning	RR: Habituation, sensitization, and	
July 17	Required reading:	familiarization	
	Rankin et al., 2009	Taiimaiizadoii	
Wed,	Tseng, 2004 Lecture 4: Classical Conditioning	RR. Classical conditioning	
July 19	9	RR: Classical conditioning Assignment Part 1	
July 17	Required reading: Mallea at al., 2019	Assignment I art I	
Mon,	Lecture 5: Operant Conditioning	RR: Operant conditioning	
July 24		KK. Operant conditioning	
July 24	Required reading:		
Wed,	Operant Conditioning (simplypsychology.org) Lecture 6: Episodic and Semantic Memory	RR: Episodic and	
July 26	(with guest lecture from Sophia Zhao)	semantic memory	
July 20	Required reading:	semantic memory	
	Renoult et al., 2019		
Mon,	Test 1: Lecture 1-5 and associated readings (6:10pm-	Midterm Reflection	
July 31	7:10pm)	RR: Skill memory and	
	Lecture 7: Skill Memory and Expertise	expertise	
	Required reading:		
	Lövdén et al., 2020		
Wed,	Lecture 8: Emotional Learning and Memory	RR: Emotional learning	
Aug 2	Required reading:	and memory	
	Tyng et al., 2017		
M, Aug 7	Civic Holiday, No Classes		
Wed,	Lecture 9: Development and Aging	RR: Development and	
Aug 9	Required reading:	aging	
	Cronin-Golomb & Bauer, 2023	Assignment Part 2	
Mon,	Lecture 10: Addiction and Review of Course Concepts	RR: Addiction	
Aug 14	Required reading:	Assignment Part 3	
	Institute for Human Anatomy, 2022 (YouTube video)		
TBA	institute for Framaii Finatority, 2022 (Tourube video)	Final Reflection	
		SONA Research	
		Participation Deadline	
TBA	Test 2: Lecture 6-10 and associated readings		

Participation and Course Culture

Learning from one another is one of the most valuable parts of this—and any—course. Everyone in the room comes from a different background and brings a unique perspective to our discussions. There will be some readings or assignments that feel more familiar to you, and some that stretch your comfort zone. Let them. This discomfort is where the most learning will happen. I hope to build a classroom culture that supports you in pushing your boundaries and allows you to support others in pushing theirs.

If you've come across ideas, concepts, or skills in other courses or areas of your life, please use this foundation to help your peers who haven't. This isn't a time to perform competence, it's an opportunity to take on the role of teacher and share what you know. Again, we all come to this class with our own sets of baggage and areas of expertise: bring to these moments the patience and bravery your peers will show you when the roles are reversed.

To meet everyone's educational needs, the classroom must be a space in which students can feel safe to experiment: to think aloud, even to be spectacularly wrong, but nonetheless to grow together. All positions and perspectives that do not deny the humanity of others will be treated equitably. Accordingly, I will not tolerate any kind of discrimination against members of historically marginalized groups, nor will I condone personal attacks. While civility may occasionally be overrated, in the classroom it is essential. Thus, while I ask that everyone avoid tone policing, I also request that we all do our best to treat each other as though everyone is acting in good faith.

Online Communication

Instructors are strongly advised to require students use their mail.utoronto.ca email addresses for all course-related communications, and you are encouraged to check this address regularly. University of Toronto email accounts are more secure, and are also governed by the institution's codes of conduct, meaning that the University has recourse to address any inappropriate communications (e.g. racist, aggressive, threatening, harassing, etc.) between students and other students as well as with the instructor. Additionally, University of Toronto email addresses are less likely to be redirected to spam and I encourage you to use them for course correspondence.

Please feel free to reach out to me by email at any time. I will try to respond to emails within 48 hours, including weekends. I am happy to respond to long emails, but if you find it easier to discuss things in person, please also feel free to book a meeting with me or drop by during student hours. For content-related questions, please post on the online discussion board.

Technology

Technology can support student learning, but it can also become a distraction. Some research indicates that multi-tasking (texting or going online) during class time can have a negative impact on learning.

However, I also understand that there may be times when you need to monitor your phone/email or even just take a minute to check out during class. I get it. You're adults, and I trust you to make the right decisions for your learning and mental health. Out of respect for your classmates, please refrain from displaying any material on a device which may be distracting or offensive to your fellow students.

I also believe that laptops/tablets/phones are an incredible resource that do have a place in the modern university environment. Therefore, use of technological devices is allowed (and encouraged!) for legitimate classroom purposes, such as taking notes, downloading course information from Quercus, participating in interactive lecture components, looking up relevant information, or working on an assigned in-class exercise.

Late Submission of Assignments

All reflections, responses, assignments, and exams should be turned in via Quercus; refer to the online class schedule for the dates on which these are due. Unless otherwise stated, they must be submitted by 11:59pm.

Unless you notify me in advance about extenuating circumstances that will prevent you from submitting your assignments on time, I will lower your grade for the assignment by 5% per day, including weekends.

- In general, the more notice you give, the better; however, an e-mail mere minutes before the deadline will suffice. My job is not to be the arbiter of timeliness, but to enable your success. Extensions often offer their own set of challenges, especially since the course will continue unabated, and thus we will need to be conscientious in their use. Regardless, I will always take your individual situation into account when evaluating and responding to your work.
- Requests for extensions will never count against you or your grade. This is not a trap. If you need an extension, simply ask for one, and I won't judge you. If timeliness becomes a systemic problem, we will have to talk about it, but only to help solve it.
- Each college at UofT also has Learning Strategists who can help you develop and work on your time management skills.

Missed Test Policy

If you miss the in-class test, please contact me within 48 hours to arrange a time to write a make-up test.

Students with Disabilities or Accommodation Requirements

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting http://www.studentlife.utoronto.ca/as/newregistration.

Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

Religious Accomodations

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

Mental Health Resources

As a student, you may experience challenges that interfere with learning such as strained relationships, increased anxiety, depression, substance use, feeling down, difficulty concentrating, lack of motivation, financial concerns, family worries, interpersonal or sexual violence, difficulty with eating or sleeping, grief, and so forth. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. Everyone feels stressed now and then—it is a normal part of university life, but that doesn't mean you should tough it out without support. Some days are better than others, and there is no wrong time to reach out. There are resources for every situation and every level of stress. An important part of the University experience is learning how and when to ask for help. Below are some of the resources you have available to you:

- http://studentlife.utoronto.ca/
- https://mentalhealth.utoronto.ca/
- https://www.svpscentre.utoronto.ca/

While I am not professionally trained to provide any kind of therapeutic services, know that I stand with you in solidarity and am ready to help in whatever way I can.

Specific Medical Circumstances

If you are sick, please do not come to class. In this era of in-person pandemic learning, we are asked to put our trust and our health in the hands of our peers and colleagues. With the very real, long-term consequences that can arise from viral infections, including COVID-19, "toughing it out" to attend class despite a contagious illness is dangerous for both you and your fellow students, and will not be tolerated. Take care of yourselves. Take care of each other.

The university is still using the ACORN Absence Declaration for missed classes, quizzes/tests, etc. in lieu of previous formal supporting documentation, which applies for both medical and nonmedical circumstances. The declaration is available on ACORN under the Profile and Settings menu. Students should submit this within one week of missing a test/quiz, and for anything else that you miss during the term that requires you to be present or to complete an assessment.

If an absence extends beyond 7 consecutive days, or if you have a non-medical personal situation preventing you from completing your academic work, you should connect with your College Registrar. They can provide advice and assistance reaching out to instructors on your behalf. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to nonmedical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or accommodation. They may be able to provide you with a College Registrar's letter of support to give to your instructors, and importantly, connect you with other resources on campus for help with your situation.

Quercus Info

This course uses the University's learning management system, Quercus, to post important information. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. The site is dynamic and new information and resources will be posted regularly as we move through the term, so please make it a habit to log in to the site on a regular basis. To access the course website, go to the U of T Quercus log-in page at https://q.utoronto.ca. Once you have logged in to Quercus using your UTORid and password, you should see the link or "card" for PSY260H1 S LEC5101. You may need to scroll through other cards to find this. Click on the PSY260H1 S LEC5101 link to open our course area, view the latest announcements and access your course resources. There are Quercus help guides for students that you can access by clicking on the "?" icon in the left side column.

<u>SPECIAL NOTE ABOUT GRADES POSTED ONLINE</u>: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.

Academic Integrity

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to me or your TA for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at http://www.writing.utoronto.ca. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see <a href="https://www.artsci.utoronto.ca/current/academicadvising-and-support/student-academicintegrity and http://academicintegrity.utoronto.ca/current/academicadvising-and-support/student-academicintegrity and https://academicintegrity.utoronto.ca/current/academicadvising-and-support/student-academicintegrity.utoronto.ca/.

Regrade Requests

If you would like to request a regrade on a test or assignment, please first reach out to your TA to discuss your work. After you meet with your TA, if you are still unsatisfied with your grade, you can email the course instructor to request a regrade. This request must be made within two weeks after the grade is released. The new grade will replace your original grade. Please note that a regrading may result in a grade that is lower, higher, or the same as the grade you initially received.

Readings

<u>Lecture 1: History of the Study of Learning and Memory</u>

Required

Will, B., Schmitt, P., & Darymple-Alford, J. (1985). Historical background and conceptual perspectives. In B. Will, P. Schmitt, & J. Dalrymple-Alford (Eds.), *Brain, plasticity, learning and memory* (pp. 15–25). Plenum Press.

Supplemental

Rose, S. (2010). Memories are made of this. In S. Radstone & B. Schwarz (Eds.), Memory: Histories, theories, debates (pp. 198–208).

Lecture 2: Neuroscience of Learning and Memory

Required

Kennedy, M. B. (2016). Synaptic signaling in learning and memory. *Cold Spring Harbor Perspectives in Biology*, 8(2), a016824. https://doi.org/10.1101/cshperspect.a016824

Supplemental

Ma, S., & Zuo, Y. (2022). Synaptic modifications in learning and memory – A dendritic spine story. Seminars in Cell & Developmental Biology, 125, 84–90. https://doi.org/10.1016/j.semcdb.2021.05.015

Nicoll, R. A. (2017). A brief history of long-term potentiation. *Neuron*, 93(2), 281–290. https://doi.org/10.1016/j.neuron.2016.12.015

Rose, S. (2010). Memories are made of this. In S. Radstone & B. Schwarz (Eds.), Memory: Histories, theories, debates (pp. 198–208).

Lecture 3: Nonassociative Learning

Required

Rankin, C. H., Abrams, T., Barry, R. J., Bhatnagar, S., Clayton, D. F., Colombo, J., Coppola, G., Geyer, M. A., Glanzman, D. L., Marsland, S., McSweeney, F. K., Wilson, D. A., Wu, C.-F., & Thompson, R. F. (2009). Habituation revisited: An updated and revised description of the behavioral characteristics of habituation. *Neurobiology of Learning and Memory, 92*(2), 135–138. https://doi.org/10.1016/j.nlm.2008.09.012

Tseng, C., Gobell, J. L., & Sperling, G. (2004). Long-lasting sensitization to a given colour after visual search. Nature, 428(6983), 657–660. https://doi.org/10.1038/nature02443

Supplemental

Blumstein, D. T. (2016). Habituation and sensitization: New thoughts about old ideas. *Animal Behaviour*, 120, 255–262. https://doi.org/10.1016/j.anbehav.2016.05.012

Lecture 4: Classical Conditioning

Required

Mallea, J., Bustamante, J., Miguez, G., & Laborda, M. A. (2019). *Classical conditioning*. In J. Vonk & T. Shackelford (Eds.), Encyclopedia of Animal Cognition and Behavior (pp. 1–16). Springer International Publishing. https://doi.org/10.1007/978-3-319-47829-6_1214-1

Supplemental

Eelen, P. (2018). Classical conditioning: Classical yet modern. *Psychologica Belgica*, 58(1), pp. 196–211, DOI: https://doi.org/10.5334/pb.451

Lecture 5: Operant Conditioning

Required

Operant conditioning: What it is, how it works, and examples. (2022, November 3). https://www.simplypsychology.org/operant-conditioning.html

Supplemental

Leeder, T. M. (2022). Behaviorism, Skinner, and operant conditioning: Considerations for sport coaching practice. *Strategies*, 35(3), 27–32. https://doi.org/10.1080/08924562.2022.2052776

Lecture 6: Episodic and Semantic Memory

Required

Renoult, L., Irish, M., Moscovitch, M., & Rugg, M. D. (2019). From knowing to remembering: The semantic–episodic distinction. *Trends in Cognitive Sciences*, 23(12), 1041–1057. https://doi.org/10.1016/j.tics.2019.09.008

Supplemental

- De Brigard, F., Umanath, S., & Irish, M. (2022). Rethinking the distinction between episodic and semantic memory: Insights from the past, present, and future. *Memory & Cognition*, 50(3), 459–463. https://doi.org/10.3758/s13421-022-01299-x
- Greenberg, D. L., & Verfaellie, M. (2010). Interdependence of episodic and semantic memory: Evidence from neuropsychology. *Journal of the International Neuropsychological Society, 16*(5), 748–753. https://doi.org/10.1017/S1355617710000676
- Rubin, D. C. (2022). A conceptual space for episodic and semantic memory. *Memory & Cognition*, 50(3), 464–477. https://doi.org/10.3758/s13421-021-01148-3
- Tulving E. (1972). *Episodic and Semantic Memory*. In E. Tulving, & W. Donaldson (Eds.), Organization of Memory (pp. 381-403). Cambridge, MA: Academic Press.

Lecture 7: Skill Memory and Expertise

Required

Lövdén, M., Garzón, B., & Lindenberger, U. (2020). Human skill learning: Expansion, exploration, selection, and refinement. *Current Opinion in Behavioral Sciences*, *36*, 163–168. https://doi.org/10.1016/j.cobeha.2020.11.002

Supplemental

- Bönstrup, M., Iturrate, I., Thompson, R., Cruciani, G., Censor, N., & Cohen, L. G. (2019). A rapid form of offline consolidation in skill learning. *Current Biology*, 29(8), 1346-1351.e4. https://doi.org/10.1016/j.cub.2019.02.049
- Lin, C.-H. J., Chiang, M.-C., Knowlton, B. J., Iacoboni, M., Udompholkul, P., & Wu, A. D. (2013). Interleaved practice enhances skill learning and the functional connectivity of fronto-parietal networks. *Human Brain Mapping, 34*(7), 1542–1558. https://doi.org/10.1002/hbm.22009

Lecture 8: Emotional Learning and Memory

Required

Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, *8*, 1454. https://doi.org/10.3389/fpsyg.2017.01454

Supplemental

Schwabe, L., & Wolf, O. T. (2010). Learning under stress impairs memory formation. *Neurobiology of Learning and Memory*, 93(2), 183–188. https://doi.org/10.1016/j.nlm.2009.09.009

Lecture 9: Development and Aging

Required

Cronin-Golomb, L. M., & Bauer, P. J. (2023). Self-motivated and directed learning across the lifespan. *Acta Psychologica*, 232, 103816. https://doi.org/10.1016/j.actpsy.2022.103816

Supplemental

Kontra, C., Goldin-Meadow, S., & Beilock, S. L. (2012). Embodied learning across the life span. *Topics in Cognitive Science*, 4(4), 731–739. https://doi.org/10.1111/j.1756-8765.2012.01221.x

Lecture 10: Addiction

Required

Why fentanyl is so incredibly dangerous. (2022). Institute for Human Anatomy. https://www.youtube.com/watch?v=LxyyvW fcqw&ab channel=InstituteofHumanAnatomy