New Graduate Course Proposal Form
Faculty of Health

The following information is required for all new course proposals. Provide evidence of consultation, where appropriate. To facilitate the review/approval process, please use the headings below (and omit the italicized explanations below each heading).

All new course proposals must include a library statement.

1. Graduate Program: Psychology

2. Responsible Unit: Department of Psychology

3. Subject Code (Rubric) and Course Number: GS/PSYC 6240 3.0

4. Credit Value: 3.00

5. Long Course Title: Technology's role in healthy aging

6. Short Course Title: Technology's role in healthy aging

7. Effective Term/Calendar Year: September 2024

8. Language of Instruction: English

9. Mode of Delivery: Asynchronous Online.
This course will be intentionally designed to be delivered online.

10. Calendar (Short) Course Description:
This is the description of the course as it will appear in the University course repository and related publications. Calendar (short) course descriptions should be written in the present tense and may be a maximum of 60 words. Please include information with respect to any pre-/co-requisites and/or cross-listing or integration in the course description.

Explore the relationship between technology, aging, and psychology, emphasizing the relevance of how different technology can address older adults (OA) health needs by fostering inclusion and promoting access for OA. Examine factors that can impact technology use among OA, including cognitive aging, social isolation/loneliness, and the challenges and opportunities associated with emerging technologies' impact on quality of life.

11. Expanded Course Description:
This is the detailed course description that will be published in course outlines, program handbooks, etc. Expand upon the short description in order to give academic approval

committees a full and clear sense of the aims and objectives of the course and the types of materials it will cover.

This graduate course delves into the multifaceted relationship between technology, healthy aging, and psychology, with an emphasis on equity, diversity, and inclusion (EDI). The emphasis on EDI comes from acknowledging and respecting the lived experience of Older Adults (OA) from diverse backgrounds and including their voice in the decision-making process about their technological needs. For this course the "technology" referred to is information and communication technology and assistive technology (i.e., consumer or patient facing technology which may include sensors, artificial intelligence, and socially assistive devices). The course **aims** to provide students with exposure to the psychological factors (cognitive, social, aging, motivational, etc.) impacting technology use among OA. We will emphasize equity and inclusion through, for example, the interaction/interview assignment where OA will be actively engaged in decision making around their technological needs and with the development of tailored training sessions for an OA students will address the unique challenges and needs that come with being older and wanting to learn how to use technology. We will emphasize diversity through, for example, the creation of a hypothetical diverse perspective workshop showcasing how technological needs may vary depending on the lived experiences of OA from different cultures, social economic status, etc. The **objectives** are to delve into topics such as: 1) life-span, cognitive, motivational, and gerontechnological theories informing the use of technology in healthy aging; 2) factors impacting adoption, usage, and acceptance (e.g., individual cognitive/physical changes, as a need to address social isolation, barriers such as lack of training and ageist attitudes, and ethical/privacy considerations); 3) explore how technology and learning about using technology, can be used to facilitate social interaction and digital literacy, respectively; and 4) convey how technologies can impact health, wellness, and quality of life. Students gain insight into the unique challenges and opportunities, and emerging trends and innovations that arise with technology solutions. The course is intentionally designed to be delivered asynchronously online by disseminating content through different learning activities using eClass and H5P (a tool in eClass for running interactive content such as videos and presentations). The online learning activities are designed to provide opportunities for students to connect with the content, each other, and their instructor and foster critical thinking and the application of knowledge in real-world scenarios. In addition, the instructor takes a constructivist approach to teaching whereby students construct knowledge actively drawing on their own experiences, collaborating with peers, older adults, course content, and the instructor. To facilitate this approach students are exposed to different **types of material** ranging from scholarly articles, case studies, research findings, and practical examples. Such activities include but are not limited to interactive discussions, projects (for instance, designing a diverse perspectives workshop about technology, analyzing case scenarios), pre-recorded guest talks, and interactions with an older adult.

12. Course Learning Outcomes:

(Necessary for Quality Assurance approval and cyclical program reviews). What will students be able to do upon completion of this course specifically?

By the end of the course, students will be able to:

1. Recognize the cognitive, social, lifespan, motivational, and gerontechnology models and theories informing technology adoption, usage, and acceptance among older adults.
2. Explain the impact of aging on technology adoption, acceptance, and usability.
3. Describe the diverse needs and preferences of older adults in relation to technology.
4. Analyze the unique challenges and opportunities of technology use among diverse cultural, socioeconomic, and demographic groups of older adults.
5. Appraise strategies used to address equitable access, ethical consideration, and privacy concerns associated with technology use among older adults.
6. Demonstrate cultural sensitivity and awareness in exploring technology solutions for seniors from diverse backgrounds.
7. Appraise the effectiveness and impact of technology interventions on seniors' motivation to use, social connection, self-efficacy, and overall well-being.
8. Critically analyze current research and emerging trends at the intersection of healthy aging, psychology, and technology, and articulate implications for innovation.

13. Rationale:

Please indicate how the proposed course will contribute to the academic objectives of the program. Please provide a description of the learning outcomes/objectives for the course. As well, please indicate the relationship of the proposed course to other existing options, particularly with respect to focus/content/approach. If overlap with other existing courses exists, please indicate the nature and extent of consultation that has taken place. Additionally, please append the graduate program's existing learning outcomes as a separate document.

Rationale for this course -
The WHO reports that "by 2030, 1 in 6 people in the world will be aged 60 years or over" (downloaded August 25th 2023 from https://www.who.int/news-room/fact-sheets/detail/ageing-and-health). WHO describes Health as not just "an absence of disease, or infirmity, but a state of physical, mental, and social well-being" (WHO, 2002). According to the PEW research foundation (Downloaded August 24th 2023 from https://www.pewresearch.org/short-reads/2019/09/09/us-generations-technology-use/) although the percentage of millennials lead on technology adoptions, there has also been a substantial increase between 2011 and 2019 in the percentage of older adults (both boomers, and generation Xers) using smartphones, tablets, and social media. Therefore, Millennials tend to have more experience with using information and communication technology and older adults want to learn more about how to use their technology effectively, safely, and securely.

In addition, the impact of Covid-19 has increased the need for better technology for reducing the impact of social distancing on OAs well-being and contribute to their independent and full lives. However, most of the people designing technology for OA often take a one size fits all approach. Not only is it important for OAs to learn how to use their technology to support their needs, but it is also important that those who create the technology take a multidisciplinary approach and work with those who have the lived experience of using technology, and/or researchers who know about the changes that occur with aging that could impact use of technology.

Finally, At York we have at least three organized research units that involve emerging technology (Institute for Technoscience and Society), artificial intelligence (The center for Artificial Intelligence and Society), Aging (York University Center for Aging Research and Education) and the Interdisciplinary Connected Minds Program (https://www.yorku.ca/research/connected-minds/associated-research-units/). Therefore, we have graduate students interested in conducting research in these areas, yet there is no graduate course that specifically looks at the intersection of technology, aging, and psychology.

This course will contribute to knowledge and skills that will move the focus away from looking just at the functionality of the technology. It will contribute to developing researchers with knowledge about, for example, OA cognitive changes that impact use of technology and current attitudes towards technology. Students will develop an understanding of the impact technology could have on older adults' self-efficacy, sense of loneliness, health, and well-being.

Contribution to academic objectives of the program (quoted text is from Dept of Psychology Grad Program learning objectives document)-

- Contribute to their "depth and breadth of knowledge" by demonstrating "a basic understanding of the key concepts…", such as describing the cognitive, social, lifespan, motivational, and gerontechnological models and theories informing technology adoption, usage, and acceptance among older adults. And describing the effectiveness and impact of technology interventions on seniors' cognitive function, social connectedness, and overall well-being.
- Contribute to their "level of application of knowledge" by demonstrating "competence in the research process by making critical use of scholarly reviews and primary sources" and demonstrating "the ability to use a range of learned techniques (e.g., theory integration and critique) to initiate new creative areas of knowledge acquisition and/or problem solving" such as by critically analyzing current research and emerging trends at the intersection of technology, aging, and psychology, and articulate implications for future practice and innovation.
- Contribute to "professional capacity and autonomy" by demonstrating "critical thinking skills and communication skills in a new environment", "manage their own learning challenges potentially outside of their discipline", and demonstrating "behaviour that is consistent with a high level of academic integrity and social responsibility, and professional ethics" such as by demonstrating knowledge of equitable access, ethical considerations, and privacy concerns associated with technology use among older adults and evaluating strategies to address them.
- Contribute to their "level of communication skills" by "communicating information, arguments, and analyses accurately and reliably and communicating effectively", such as by discovering and discussing the diverse needs and preferences of older adults in relation to technology.

Relationship of the proposed course to existing options –
There may be overlap with some theoretical models and frameworks with graduate courses such as "Cognitive Neuroscience", "Cognitive Neurorehabilitation", "Lifespan Cognitive Development", "Cultural Psychology", "Personality Processes and Social Self", and "Social Psychology of Intergroup Relations". But the overlap is minimal (e.g., overlapping theories, the

rehabilitation may involve a technical intervention) as the focus of the proposed course is much broader looking at the intersection of technology, healthy aging, and psychology.

Consultation's –
Due to potential overlap in courses from Brain, Behavior, Cognitive Science (BBCS), Developmental Science (DS), and Social/Personality (SP) areas, emails were sent to Graduate Area Heads (Erez Freud, Jeni Pathman, and Amy Muise, respectively) as well as members of the Department (Gary Turner, Laurie Wilcox, Raymond Mar) and they were asked for feedback on this new course proposal. Specifically, they were asked whether they had any issues or concerns with it, whether they thought there may be any substantive overlap with grad courses in their respective areas, and whether students in their respective areas would be interested in this course. Dr. Freud said "the course looks great, and I don't see any conflict with BBCS courses", he also said, "most of the BBCS student are also enrolled in the Neuroscience diploma, thus limiting their ability to choose other elective courses." Dr. Pathman said she thought the course "is timely and especially liked the creative evaluations/assignments". She was not sure if many current DS grad students would take it as they are more focused on children. Dr. Wilcox thought it was an "ambitious and valuable course" and there was a "place for it our curriculum", she also provided suggestions on the course proposal (e.g., to clarify the VALUE AACU rubrics, and what I meant by EDI) which I have done. Dr. Turner thought the course would be a "phenomenal addition to our program", he expressed concern about enrollment and suggested students from other units may be interested and "trainees that fall under the Collected Minds umbrella". Dr. Muise agreed that there may be "some slight overlap in the theories or frameworks, but the focus on technology and on an aging population would make it quite distinct" and that she had "no concerns, especially given that it has the potential to draw students across several areas". Dr. Mar did not think "there was a course like it" in the program, and he thought some students in the SP area may be interested in it as "they are always looking for electives".

14. Evaluation:

Please supply a detailed breakdown of course requirements, including the type and percentage value of each assignment. The expectation is that course assignments can normally be accomplished within the course period. If applicable, details regarding expectations and corresponding grading requirements with respect to attendance and participation should be provided.

Assessment Strategy	**Weight** (% of Final Grade)	**Evaluates Course Learning Outcomes**
Ethical Dilemma discussion	10%	4 – 6
Design and hypothetically implement a "diverse perspectives about aging and technology" workshop	30% (Part A) 10% (Part B)	2 – 4, 6 – 8
Interaction/interview/training with an older adult (OA)	40%	2 – 8
Mini-quizzes/concept map	10%	1 – 3

Ethical Dilemma discussion (addresses learning outcome 4 – 6): Students will engage in an online debate examining the ethical dilemma related to technology use among older adults (such

as unpacking the impact on loneliness and social isolation with using artificial intelligent socially assistive products). To encourage critical thinking and ethical decision-making they will analyze case scenario(s), identify potential ethical issues, and articulate implications for future practice and potential innovations to address them.

A rubric will be designed inspired by the ethical reasoning VALUE AACU (https://www.aacu.org/initiatives/value-initiative/value-rubrics) rubric to evaluate whether students reach a benchmark, milestone, or mastery levels of competency for ethical self-awareness, understanding different perspectives/concepts, ethical issue recognition, application of ethical perspectives/concepts, etc.

Grading: This activity will be worth 10% of their grade.

Design and hypothetically implement a "diverse perspectives about aging and technology" workshop (addresses learning outcomes 2 – 4, 6 – 8):

For Part A of this project students will start by being formed into teams, they will use zoom to interact together, they will create a team charter and identify roles and actions. One of the students from each team will be encouraged to create an account with ChatGPT (the free version 3.5, OpenAI 2023, https://openai.com/blog/chatgpt) to kickstart their teams thinking by asking ChatGPT to design a workshop to "learn about older adults needs for using various types of technology to facilitate the older adults' social activity and/or encourage healthy aging all while ensuring that diverse perspectives are represented at the workshop and the workshop is inclusive". If the students are uncomfortable with working with ChatGPT or creating an account, then this information will be provided to them by the instructor. Once this information has been provided students will need to work together to demonstrate a level of knowledge and competence that surpasses what ChatGPT generated and counter any bias the ChatGPT generated. As a team they will clarify workshop objectives, duration, and agenda. They will write up the workshop details and augment it with references based on the information learned in the course and found in the literature to support the accuracy of what is proposed. Based on the literature, they will suggest a potential speaker for a keynote talk and provide key bullet points about what the speaker could potentially cover. They will provide an inclusive list of panel discussants and topics for the panel discussions. As a team they will engage in the group activities proposed for the workshop (e.g., if empathy mapping is proposed they will work with their group to fill in the empathy map based on OA challenges and needs reported in the literature/course), they will work together as a group to discuss practical solutions to overcome challenges identified. All this work (documentation of how they used AI, hypothetical workshop objectives, duration, agenda, speakers, discussants, key points covered, and summary of outcome of group activities) will be submitted for a group grade.

For Part B: each student will create and submit an individualized action plan based on the information gleaned from the hypothetical workshop(s) to implement one type of technology solution for a hypothetical older adult in their community.

A rubric will be designed inspired by three VALUE AACU rubrics (https://www.aacu.org/initiatives/value-initiative/value-rubrics) to evaluate whether students reach a benchmark, milestone, or mastery levels of competency for teamwork (evaluate effort they put into team tasks, their manner of interacting with others on team, and the quantity and quality of contributions they make to team discussions), critical thinking (the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion), and information literacy (the ability to know when there is a need for information,

to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand).

Grading: Part A of this activity is worth 30% of their grade. Part B is worth 10% of their grade.

Interaction/interview/training with an older adult (OA) (to address learning outcome 2 – 8)**.** The OA could be a family member or friend older than age 65 (or assigned by the instructor) who is interested in using technology and has access to it. Students will interview the OA to identify challenges/barriers, and current level of technological literacy. Based as closely as possible to the OAs preferences, the student will choose a technology solution that aligns with the OA's needs and abilities and select some basic activities to practice throughout the term (e.g., the literature suggests that what older adults seek information about is to learn more about using email, joining social media, uploading a photo to social media, listening to music, searching for information, videoconferencing, and playing games). Students will be able to consult with ChatGPT and/or instructor for suggestions for technology solutions, basic activities to learn how to use the technology, and potential steps for training how to use the technology. Students will then augment any suggestions and develop one-on-one training sessions tailored to the OA's pace and learning style, identify resources, and tech support (contact person or helpline). They will create and provide printed or digital guides with step-by-step instructions. Students will offer these one-to-one training sessions at least 4 times throughout the term. Students will determine from the literature approximately 4-5 survey questions to ask the OA at the end of the term to determine whether the OAs technology needs have been addressed, whether their motivation to use the tech has changed, whether their self-efficacy and overall autonomy regarding using the technology has changed, and whether over-all well-being has changed. Components of this project can be handed in during the term for formative feedback and input from the instructor. For the final report students will hand in their portfolio of work (including how they used ChatGPT to support their project) and a final reflection on their 1-1 interaction using the reflection model: What (Reporting the facts and what happened, objectively), So What (What did they learn? What difference did the interaction make?), Now What (How will they think or act in the future because of this experience?).

A rubric will be designed inspired by the problem solving VALUE AACU rubrics (https://www.aacu.org/initiatives/value-initiative/value-rubrics) to evaluate whether students reach a benchmark, milestones, or mastery levels of competency (for example, are they able to define the problem, identify strategy, propose solutions, implement solution, evaluate outcomes) combined with a reflection rubric (make a meaningful connection between theory, practice, and personal experience, show evidence of change in perspective as a result of the experience or are able to justify why they maintain their perspective).

Grading: This project will be worth 40% of their grade.

Mini-quizzes and Concept mapping exercise (addresses Learning outcomes 1 – 3). Quiz questions will be embedded in the learning modules and/or within specific content. Concept maps will be used to determine students' engagement with the course content, and to facilitate their identifying connections between topics. Students can use their performance on these tasks to track their learning of the content.

Grading: These mini-quizzes/concept maps will total to 10% of their grade.

15. Integrated Courses: N/A

This course will not be integrated.

16. Cross-listed Courses: N/A
This course is not cross listed with any other courses.

17. Enrolment Notes:
Is the course limited to a specific group of students; closed to a specific group of students; and/or if there is any additional information necessary for the student to know before enrolling.

Open to psychology graduate students but also available to students from other programs upon request.

18. Faculty Resources:
Provide the names of faculty members in your program qualified to teach this course. Stipulate the frequency with which you expect this course to be offered, including the impact that this course will have on faculty resources.

Susan Murtha, Raymond Mar, Laurie Wilcox, Gary Turner could teach this course.
I expect the course to be offered every year or every other year depending on demand.

Faculty resources impacted would be potentially the EE coordinator for facilitating relationship with older adults, and to contribute to the development of the evaluation rubric for the experiential component. The Faculty curriculum design specialist will also be accessed for input on design of online learning activities in eClass to facilitate grad students acquiring learning outcomes.

19. Physical Resources:
Please provide a statement regarding the adequacy of physical resources (equipment, space, labs, etc.), including whether or not additional/other physical resources are required and how the need for these additional/other physical resources will be met.

No additional physical resources are required.

20. Bibliography and Library Statement:
Please provide an appropriate and up-to-date bibliography in standard format. A statement from the University librarian responsible for the subject area certifying that adequate library resources are available for the new course must be provided.

Preliminary bibliography -

- Astell, A.J., Andrews J.A., Bennion, M.R. and Clayton D. (2021). Technology for Health aging and well-being co-producing solutions. Methods. Vol 12. 745947.

- Calhoun, D., Bok Lee S., 2019. Computer usage and cognitive capability of older adults: Analysis of data from the health and retirement study. Educational Gerontology, 45 (1), 22-33.
- Carstensen, L.L., Isaacowitz, D.M., Charles, S.T. (1999) Taking time seriously, a theory of socioemotional selectivity. American Psychologist 54 (3), 165-181.
- Chan, M.Y., Haber, S., Drew L.M., Park, D.C. (2016) Training older adults to use tablet computers: does it enhance cognitive function. Gerontologist 56 (3) 475-484.
- Chen, K. (2020) Use of gerontechnology to assist older adults to cope with the Covid-19 pandemic. 21 (7), 983-984.
- Choi, EY, Wisniewski K M, Zelinski E M (2021) Information and communication technology use in older adults: A unidirectional or bi-directional association with cognitive function. Computers in Human Behavior 121, 106813.
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- Hoque, R., Sorwar, G. (2017) Understanding factors influencing the adoption of mHealth by the elderly: An extension of the UTAUT model. Internal journal of Medical Informatics. 101, 75-84.
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- Latikka, R., Rubio-Hernandez, R., Lohan, E. S., Rantala, J., Ferndandez, F.N., Laitinen, A., Oksanen, A. (2021). Older adults' loneliness, social isolation, and physical information and communication technology in the era of ambient assisted living: a systematic literature review. J. Med. Internet Res (open access). 23 (12): e28022.
- Levine, D.M. Lipsitz S.R., Linder, J.A., (2018) Changes in everyday and digital health technology use among seniors in declining health. Journals of Gerontol: Medical Sciences. 73 (4) 552-559.
- Li, C., Mo, W., Wei, Q. (2023) The role of internet use and offline social engagement in the health of Chinese older adults: Evidence from nationally representative samples. Healthcare (open access), 11, 653
- Lobez, K.J., Tong, C., Whate, A., Boger, J. (2021) "It's a whole new way of doing things": the digital divide and leisure as resistance in a time of physical distance. World Leisure Journal. (63 (3) 281-300.
- Myhre, J.W., Mehl, M. R., Glisky E. L. (2017) Cognitive benefits of online social networking for healthy older adults. Journals of Gerontology B: Psychological Sciences and social sciences, 72 (5) 752-760
- Neves, B.B., Baecker R., (2022) Mixing methods and sciences: A longitudinal Cross-Disciplinary Mixed Methods Study on Technology to address social isolation and loneliness in later life. Journal of Mixed Methods Research, 16(1), 88-111.

- Quinn, K., (2018) Cognitive Effects of social media use: A case of older adults. Social Media + Society. Jul-Sept, 1-9.
- Satterly, B.A., Cullen, J., Dyson, D.A., (2018) The intergenerational mentoring model: an alternative to traditional and revers models of mentoring. Mentoring and Tutoring: Partnerships in Learning. 26(4), 441-454.
- Schreurers, K., Quan-Haase A. (2017). Problematizing the digital literacy paradox in the context of older adults' ICT use: Aging, Media Discourse, and Self-determination. Canadian Journal of Communication 42(2), 359-377.
- Szabo, A., Allen, J., Stehens, C, Alpass, F., (2019) Longitudinal analysis of the relationship between purposes of internet use and well-being among older adults. Gerontologist, 59 (1), 58-68.
- Wan, X., Lighthall, N.R. Paulson, D. (2022). Subjective markers of successful aging and change in internet use among older adults: The distinctive role of subjective health. Computers in Human Behavior I27, 107064.
- Zhou, D., Xu, Y., Ai, P. (2022) The effects of online social interactions on life satisfaction of older Chinese adults: New insights based on a longitudinal approach. Healthcare, 10, 1964. pages 1-19.

Please see attached for the library statement.

Please submit completed forms and required supporting documentation by email to Pina Guzzo-Foliaro, Administrative Secretary Research – pdimaria@yorku.ca

MEMORANDUM

York University Libraries

To: Susan Murtha, Department of Psychology, Faculty of Health

From: Marcia Salmon, Digital Scholarship Metadata Librarian, Content Development and Analysis

Date: Monday November 6, 2023

Subject: Library Statement of Support – Technology's role in healthy aging (GS/PSYC 6240)

Summary

York University Libraries (YUL) is well positioned to support the proposed course. Faculty and students can make use of an array of library resources and services to meet their research and learning needs. This statement highlights offerings related to the major themes of the course. It also brings attention to collections of interest from connected fields such as information technology, gerontology, and health studies.

Collections

The Libraries' collections echo the curricular and research priorities of students and faculty. Care is given to select materials that reflect new courses taught at York, as well as research and publishing trends. Library personnel review reading lists supplied for proposed courses to address any potential gaps. Tailored purchasing profiles ensure new materials are regularly purchased on subjects such as:

- Developmental Psychology, Gerontology, Information Technology

Historically, textbook publishers have not made their electronic content available for purchase by libraries. This remains an ongoing challenge. Library personnel can assist with locating Open Access alternatives. Furthermore, the Libraries' Open Scholarship department offers support to researchers on digital publishing, open repositories, and Creative Commons licensing.

The Omni single-search interface provides students with access to a wide range of materials, including books, book chapters, articles, dissertations, streaming media, etc. Library users may also request items from partner libraries through Omni. A selection of electronic collections of particular interest are highlighted below. The A-Z list on the Libraries' website provides a complete register of electronic offerings.

eBook Platforms:

- De Gruyter eBooks

- Oxford Scholarship Online
- Cambridge Core
- Taylor & Francis eBooks
- ProQuest eBook Central
- Scholars Portal Books

Subject Databases:

- APA PsycInfo
- PsycARTICLES
- Medline
- CINAHL: Cumulative Index to Nursing and Allied Health
- EMBASE
- Web of Science
- Applied Social Sciences Index and Abstracts
- Sociological Abstracts

Reference Resources:

- The SAGE Encyclopedia of Lifespan Human Development
- Oxford Research Encyclopedia of Psychology
- Encyclopedia of Critical Psychology
- Oxford Research Encyclopedia of Psychology
- Oxford Reference Online

Newspaper/ Magazine Collections:

- Alternative Press Index
- Press Reader
- Factiva
- Eureka.cc
- Nexis Uni

Streaming Media:

- PsycTHERAPY
- Counseling and Therapy in Video (Alexander Street)
- Kanopy
- SAGE Research Methods
- Curio.ca

Services

Library Instruction

Librarians and archivists help students build research skills and digital fluencies through workshops, online research guides, and individual research assistance. Instructors can arrange a research skills workshop (or seminar) geared to a specific assignment, course, or competency.

Research Guides of Interest:

- Psychology Research Guide
- Health Studies and Global Health Research Guide
- Information Technology Research Guide
- Nursing Research Guide

Research Help

Online research assistance is available in both English and French via chat and email. In addition, students and faculty can book one-hour research consultations with a specialist librarian.

Accessibility Services

Library Accessibility Services (LAS) provides alternative content formats, as well as adaptive technologies and spaces. With a referral, York University faculty and students can request transcription services or reserve an accessibility lab workstation. Contact lashelp@yorku.ca with questions.

New Graduate Course Proposal Form
Faculty of Health

The following information is required for all new course proposals. Provide evidence of consultation, where appropriate. To facilitate the review/approval process, please use the headings below (and omit the italicized explanations below each heading).

All new course proposals must include a library statement.

1. Graduate Program: Psychology

2. Responsible Unit: Department of Psychology

3. Subject Code Rubric and Course Number: PSYC 6664

4. Credit Value: 3.0

5. Long Course Title: Developmental Cognitive Neuroscience

6. Short Course Title: Dev Cog Neuro

7. Effective Term Calendar Year: Winter 2025

8. Language of Instruction: English

9. Mode of Delivery: Online (with synchronous meeting time).

10. Calendar Short Course Description:

Developmental Cognitive Neuroscience is an interdisciplinary field of study at the intersection of developmental psychology, cognitive development, and cognitive neuroscience. This course covers theoretical issues, methodologies, and research in developmental cognitive neuroscience.

11. Expanded Course Description:
This course is designed for graduate students in the Developmental Science area, but other graduate students within and outside Psychology are encouraged to enroll.

The purpose of the course is to introduce students to Developmental Cognitive Neuroscience, an interdisciplinary field of study that combines developmental psychology, cognitive development, and cognitive neuroscience. This field has emerged and expanded quickly in the past few decades, due to various factors including the development of new technologies and analysis techniques. In this course we will cover theoretical issues, methodologies, and research in developmental cognitive neuroscience. Focus is on childhood (infants, children, adolescents)

and typical development, although some discussions will include atypical development. Methods that will be highlighted throughout the course include Electroencephalography (EEG; ERP), neuroimaging (structural: MRI; functional: fMRI; fNIRS), and comparative approaches.

Class topics will involve an introduction to the methods and populations, genes and epigenetics, prenatal and postnatal brain development, perceiving and acting on the world, the social world, memory, language, executive function, all through the lens of developmental cognitive neuroscience. Additional special topics may also be included based on instructor preference and expertise.

12. Course Learning Outcomes:

By the end of the course, students will:
a. Demonstrate understanding of the theoretical issues, advantages, and challenges in developmental cognitive neuroscience research.
b. Demonstrate understanding of the methods used in developmental cognitive neuroscience research.
c. Critically analyze foundational and recent research in various topics within the field.
d. Communicate emerging trends in developmental cognitive neuroscience.

13. Rationale:

The course is designed to contribute to academic objectives of the program, with focus on the Developmental Science area. The course is related to the following sections of the Psychology Department Learning Objectives document: Depth and Breadth of Knowledge, Level of Application of Knowledge, and Levels of Communication Skills. Quoted text below is directly from this learning objectives document.

Through class readings and class discussions, students will "demonstrate a basic understanding of the key concepts ... the ability to list, define and/or describe the state of knowledge… as well as the current gaps in the knowledge base of" developmental cognitive neuroscience. Students will "communicate effectively through a number of ways" and "demonstrate the capacity to communicate information, arguments, and analyses accurately and reliably" during class presentations and in the final paper. During class discussions, presentations and the final paper, students will make use of "primary sources to review, present and critically evaluate" information.

Relation to other courses:
There is some overlap with a Clinical-Developmental area graduate Psychology course called "Biological and Cognitive Bases of Development." This overlap is due to similar populations of interest and developmental frameworks. There is minimal overlap with the course "Fundamentals of Neuroscience," in terms of the methods researchers can use to study the human brain. The overlap is minimal since the proposed course is about cognitive systems across childhood. There is a Developmental Science (DS) area course called "Developing the Visual Brain" taught by Dr. Scott Adler that is related to the present proposal. However, only one

proposed course class topic will focus on the visual system. Thus, "Developing the Visual Brain" can be seen as a more advanced graduate course that focuses entirely on the visual system and capacities (e.g., face perception). The proposed course is a broader overview course which covers various other topics in Developmental Cognitive Neuroscience. In addition, there is a DS graduate course called "Research Methods in Developmental Neuropsychology" that has been taught in the past. The focus of this course is a deep drive into neuroscience techniques (EEG, ERP, fMRI). In other words, the focus is on methodology. The proposed course is different because it does not focus on methodology, but instead focuses on a broad range of research findings using these methodological tools. The present course would not be offered in the same year as this methods course. Finally, the proposed course, unlike these other courses, is unique because it is an integrated undergraduate/graduate course. In summary, the proposed course is unique (the intersection of cognitive developmental psychology and cognitive neuroscience) and not available to DS students elsewhere.

14. Evaluation:

1. Participation 25%

   Both undergraduate and graduate students will be evaluated on their engagement and contribution to class topics in person (i.e., synchronous meets) and via discussion forums (asynchronous activity). Graduate students, in addition, will be required to submit 2-3 discussion questions, based on class readings, prior to each synchronous class. Thus, for graduate students, both the discussion questions and their contribution to class discussions will be evaluated.

2. Presentations 40%

   Students will take part and be evaluated on 2 presentations. Presentations consist of summarizing a research article (including motivation and implications of the work) and leading a discussion with the class. Presentations may be individual, in pairs, or in groups, depending on class size.

3. Final paper 35%

   Students will turn in an APA-style research paper (a research proposal). This paper will describe a novel experiment in developmental cognitive neuroscience. For undergraduate students, this will only consist of a study outline and a paper Introduction section. For graduate students, this will additionally include the following paper sections: a Proposed Method, Analytic Plan, Predicted Results and Discussion. All papers must include a title page, abstract, and references.

15. Integrated Courses:

This is an integrated course. The current graduate course will be integrated with a 4000-level undergraduate course in the Department of Psychology, with a course value of 3.0. Course code for the undergraduate course is Psych 4xxx.

16. Cross-listed Courses:

This course is not cross-listed.

17. Enrolment Notes:
This course is mainly open to Psychology students.

18. Faculty Resources:
Thanujeni Pathman will teach this course. It is expected that the course will be offered every 2 or 3 years. Other faculty with the developmental science area can also teach this course – particularly, Lara Pierce.

19. Physical Resources:
None. (This course is being offered online to avoid physical resource demands.)

20. Bibliography and Library Statement:

A textbook will provide foundational knowledge. The textbook choice may be modified by the instructor, but current plan is to require the following:

De Haan, M., Dumonthell, I., & Johnson, M.H. (2023). Developmental Cognitive Neuroscience An Introduction, 5th Edition. Wiley Blackwell.

Students will also select (with guidance from the instructor) empirical articles that are available online via York libraries, for their presentations.

MEMORANDUM

York University Libraries

To: Thanujeni (Jeni) Pathman, Associate Professor, Developmental Science Area Coordinator
Department of Psychology, York University

From: Marcia Salmon, Digital Scholarship Metadata Librarian, Content Development and Analysis

Date: Thursday November 9, 2023

Subject: Library Statement of Support – Developmental Cognitive Neuroscience (PSYC 6664)

Summary

York University Libraries (YUL) is well positioned to support the proposed course. Faculty and students can make use of an array of library resources and services to meet their research and learning needs. This statement highlights offerings related to the major themes of the course. It also brings attention to collections of interest from connected fields such as developmental psychology, cognitive psychology, and neuroscience.

Collections

The Libraries' collections echo the curricular and research priorities of students and faculty. Care is given to select materials that reflect new courses taught at York, as well as research and publishing trends. Library personnel review reading lists supplied for proposed courses to address any potential gaps. Tailored purchasing profiles ensure new materials are regularly purchased on subjects such as:

- Developmental Psychology, Cognitive Psychology and Neuroscience

Historically, textbook publishers have not made their electronic content available for purchase by libraries. This remains an ongoing challenge. Library personnel can assist with locating Open Access alternatives. Furthermore, the Libraries' Open Scholarship department offers support to researchers on digital publishing, open repositories, and Creative Commons licensing.

The Omni single-search interface provides students with access to a wide range of materials, including books, book chapters, articles, dissertations, streaming media, etc. Library users may also request items from partner libraries through Omni. A selection of electronic collections of particular interest are highlighted below. The A-Z list on the Libraries' website provides a complete register of electronic offerings.

eBook Platforms:

- De Gruyter eBooks

- Oxford Scholarship Online
- Cambridge Core
- Taylor & Francis eBooks
- ProQuest eBook Central
- Scholars Portal Books

Subject Databases:

- APA PsycInfo
- PsycARTICLES
- Medline
- CINAHL: Cumulative Index to Nursing and Allied Health
- EMBASE
- Web of Science
- Applied Social Sciences Index and Abstracts
- Sociological Abstracts

Reference Resources:

- The SAGE Encyclopedia of Lifespan Human Development
- Oxford Research Encyclopedia of Psychology
- Encyclopedia of Critical Psychology
- Oxford Research Encyclopedia of Psychology
- Oxford Reference Online

Newspaper/ Magazine Collections:

- Alternative Press Index
- Press Reader
- Factiva
- Eureka.cc
- Nexis Uni

Streaming Media:

- PsycTHERAPY
- Counseling and Therapy in Video (Alexander Street)
- Kanopy
- SAGE Research Methods
- Curio.ca

Services

Library Instruction

Librarians and archivists help students build research skills and digital fluencies through workshops, online research guides, and individual research assistance. Instructors can arrange a research skills workshop (or seminar) geared to a specific assignment, course, or competency.

Research Guides of Interest:

- Psychology Research Guide
- Neuroscience Research Guide

Research Help

Online research assistance is available in both English and French via chat and email. In addition, students and faculty can book one-hour research consultations with a specialist librarian.

Accessibility Services

Library Accessibility Services (LAS) provides alternative content formats, as well as adaptive technologies and spaces. With a referral, York University faculty and students can request transcription services or reserve an accessibility lab workstation. Contact lashelp@yorku.ca with questions.

New Graduate Course Proposal Form
Faculty of Health

The following information is required for all new course proposals. Provide evidence of consultation, where appropriate. To facilitate the review/approval process, please use the headings below (and omit the italicized explanations below each heading).

All new course proposals must include a library statement.

1. Graduate Program: Psychology

2. Responsible Unit: Department of Psychology

3. Subject Code Rubric and Course Number: PSYC 6668

4. Credit Value: 3.0

5. Long Course Title: Professional Issues in Developmental Psychology and Neuroscience

6. Short Course Title: Prof Issues in Dev Psych and Neuro

7. Effective Term Calendar Year: Winter 2025

8. Language of Instruction: English

9. Mode of Delivery: Blended or In person.

10. Calendar Short Course Description:

This professional development course is open to graduate students in psychology; topics are covered through the lens of developmental psychology and neuroscience. Topics include ethics, the impact of research on policy and society, and careers inside and outside academia. Practical outcomes include the opportunity to refine academic skills and the creation of outputs to enhance professional profiles.

11. Expanded Course Description:
This course is designed for graduate students in the Developmental Science area, and topics will be addressed through the lens of developmental psychology and neuroscience. However, most topics apply to all graduate students; students from other graduate areas within Psychology and related areas outside Psychology are encouraged to enroll.

The purpose of the course is to introduce students to many of the activities and responsibilities they will encounter as academics and researchers. This course will provide

a forum for discussion about how to navigate research careers and be an active participant in the scientific community. It is often expected that students will acquire academic and professional skills simply by observing their mentors. However, a formal, systematic, and explicit discussion of each of the topics is warranted and will help hone student skills. Discussion topics will include the following:
Ethical Issues in Developmental Psychology and Neuroscience; Impact of Developmental and Neuroscience Research on Policy and Society; Careers Inside and Outside Academia; Publication and Review Process; Conquer the Revise and Resubmit; Supporting the Work: Grant Proposals; Conferences and Networking; Self-Promotion: CV, Professional websites and social media; Navigating the Hidden Curriculum; Time Management, Presentation and Writing Skills. Practical outcomes will include the following: developing an academic CV, developing a personal website, practice reviewing a manuscript, preparing a mini-grant proposal.

12. Course Learning Outcomes:

By the end of the course, students will:
a. Demonstrate understanding of the various responsibilities and ethical issues pertaining to academics and scientists in developmental psychology and neuroscience.
b. Demonstrate understanding of some of the careers related to developmental psychology and neuroscience.
c. Enhance their skills in time management, writing and oral communication.
d. Design their own professional website and CV.
e. Understand and practice skills related to the publication process.
f. Practice skills related to grant writing.

13. Rationale:

The course is designed to contribute to academic objectives of the program, with focus on the Developmental Science area within Psychology. The course is related to the following sections of the Psychology Department Learning Objectives document: Research & Scholarship, Level of Application of Knowledge, Professional Capacity/Autonomy, and Levels of Communication Skills. Quoted text below is directly from this learning objectives document.

Through class readings, class discussions, and via assessments, students will develop skills to help them "communicate effectively through a number of ways" and "demonstrate the capacity to communicate information, arguments, and analyses accurately and reliably (orally, visually and in written format)." The mini-grant assessment will additionally require students to "make critical use of scholarly reviews and primary sources to review, present and critically evaluate" to "develop new lines of argument and hypothesis testing" and "write effective research proposals." Students will be asked to think about their own research and the field more broadly when discussing society and policy implications, which is related to the learning objective "answer challenging questions about their research contribution effectively and appropriately and have the capacity for discussing the implications of their work to related fields." The goal of the course is to explicitly teach skills that are "necessary for advancing their own independent research program (in academia) or other setting." Further class discussions on research ethics, for

example, will help students learn how to "demonstrate a professional level of academic and/or clinical integrity and ethical practices, and social responsibility" and "act in an appropriate ethical fashion for research conducted in human and/or animal models and follow proper ethics procedures and protocols in experimental or research design and implementation of their studies."

The proposed course is unique and not available to Developmental Science students elsewhere. The Clinical areas within our department have courses on professional practice and ethical issues, but these courses are not appropriate or available to non-clinical students. There are professional development workshops offered by the graduate school, but none are specific to professional issues in developmental psychology.

14. Evaluation:

1. Participation in class discussions 40%
   Students will be evaluated on their engagement and contribution to class topics both in person and via discussion forum posts on E-Class.
2. CV and research/teaching statement assignment 10%
   Students will create an academic curriculum vitae and either a research or teaching statement (1 page). The CV and statement will be based on each individual student's own experience and focus within the field.
3. Professional website assignment 10%
   Students will create a professional website that describes their research to the public and promotes their work to the scientific community.
4. Manuscript review 10%
   Students will be divided into groups and assigned a manuscript that they will discuss together, critically evaluate, and then form a written manuscript review.
5. Mini-grant proposal 30%
   Students will write a grant proposal on a topic within developmental psychology or developmental cognitive/social neuroscience. This will be similar to what would be proposed as part of a CGS application.

15. Integrated Courses:
This is not an integrated course.

16. Cross-listed Courses:
This course is not cross-listed.

17. Enrolment Notes:
This course is mainly open to Psychology students. Students whose research is related to child development, lifespan development, or neuroscience will find assessments most useful to them.

18. Faculty Resources:
Thanujeni Pathman will teach this course. It is expected that the course will be offered every 2-3 years. Other faculty within the Developmental Science area are also able to teach this course (e.g., Lara Pierce).

19. Physical Resources:
One small seminar room will be required.

20. Bibliography and Library Statement:

Preliminary bibliography -

Drotar, D. (2011). Contemporary Directions in Research Ethics in Pediatric Psychology: Introduction to the Special Section. Journal of Pediatric Psychology, 36(10), 1063–1070.

Hames, I. (2007). *Peer Review and Manuscript Management in Scientific Journals: Guidelines for Good Practice* (1st ed.). John Wiley & Sons, Incorporated.

Illes, J., Kirschen, M. P., Edwards, E., Stanford, L. R., Bandettini, P., Cho, M. K., Ford, P. J., Glover, G. H., Kulynych, J., Macklin, R., Michael, D. B., & Wolf, S. M. (2006). Ethics. Incidental findings in brain imaging research. *Science (American Association for the Advancement of Science)*, *311*(5762), 783–784.

Posado, M.M. (2004). Ethical Issues in Assessments with Infants and Children. *Graduate Student Journal of Psychology*, 6, 42-47.

Publication manual of the American Psychological Association: the official guide to APA style. (Seventh edition.). (2020). American Psychological Association.

Sharpe, D., & Ziemer, J. (2022). Psychology, Ethics, and Research Ethics Boards. *Ethics & Behavior,* 32, 658–673.

Zimmer, W. K., Chang, C.-N., Semma, B. M., & Fowler, D. (2022). Developing Graduate Writing Habits and Skills: Establishing Writing Sessions with STEM Graduate Students. *College Teaching*, *70*(2), 133–144.

MEMORANDUM

York University Libraries

To: Thanujeni (Jeni) Pathman, Associate Professor, Developmental Science Area Coordinator
Department of Psychology, York University

From: Marcia Salmon, Digital Scholarship Metadata Librarian, Content Development and Analysis

Date: Thursday November 9, 2023

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Summary

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- Developmental Psychology, Neuroscience, and Professional Ethics for Psychology Researchers.

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- EMBASE
- Web of Science
- Applied Social Sciences Index and Abstracts
- Sociological Abstracts

Reference Resources:

- The SAGE Encyclopedia of Lifespan Human Development
- Oxford Research Encyclopedia of Psychology
- Encyclopedia of Critical Psychology
- Oxford Research Encyclopedia of Psychology
- Oxford Reference Online

Standards:

- Publication manual of the American Psychological Association: the official guide to APA style. (Seventh edition.)

Newspaper/ Magazine Collections:

- Alternative Press Index
- Press Reader
- Factiva
- Eureka.cc
- Nexis Uni

Streaming Media:

- PsycTHERAPY
- Counseling and Therapy in Video (Alexander Street)
- Kanopy
- SAGE Research Methods
- Curio.ca

Services

Library Instruction

Librarians and archivists help students build research skills and digital fluencies through workshops, online research guides, and individual research assistance. Instructors can arrange a research skills workshop (or seminar) geared to a specific assignment, course, or competency.

Research Guides of Interest:

- Psychology Research Guide
- Neuroscience Research Guide
- Systematic & Scoping Review Research Guide

Research Help

Online research assistance is available in both English and French via chat and email. In addition, students and faculty can book one-hour research consultations with a specialist librarian.

Accessibility Services

Library Accessibility Services (LAS) provides alternative content formats, as well as adaptive technologies and spaces. With a referral, York University faculty and students can request transcription services or reserve an accessibility lab workstation. Contact lashelp@yorku.ca with questions.