HP4032: Laboratory in Geropsychology

Academic Year	2022-23	**Semester**	2
Seminar Day/Time	Mondays/12.30pm – 3.20pm	**Seminar Venue**	Classroom: LHS-TR+50, Computer Lab: SHHK-01-10
Coordinator and Instructor	Wayne Freeman CHONG	**Email**	Wayne.chong@ntu.edu.sg
Pre-requisites	HP1000 & HP1100 & HP2100 & HP2300 OR CS2008 (Applicable to PSMA) & HP1000 (Applicable to PSMA) & HP2100 (Applicable to PSMA) & HP2300 (Applicable to PSMA) OR HP1000 & HP1100 & HP2100 & HP2400 OR HP1000 & HP1100 & HP2100 & HP3303 OR CS2008 & HP1000 & HP2100 & HP2400 OR CS2008 & HP1000 & HP2100 & HP3303		

Course Aims

This course aims to provide students with hands-on training in conducting geropsychological research.

This course is designed for advanced psychology undergraduate students who are interested in learning the know-hows of empirical research. Students in this course shall gain the foundational knowledge and skills needed towards becoming a competent geropsychology researcher, both in evaluating and in conducting empirical research in geropsychology.

Mastery of the content in this course will (i) equip students with the necessary research foundation and confidence in conducting a final year project (FYP), and (ii) enhance future career and graduate study opportunities of students, especially in geropsychology.

Intended Learning Outcomes (ILO)

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

1. Develop well-informed research questions and hypotheses in geropsychology.
2. Explain the importance of ethics in geropsychological research and write an ethics application.
3. Design a methodologically sound review of geropsychological research literature.
4. Design a methodologically sound empirical study in geropsychology.
5. Execute a methodologically sound empirical study in geropsychology.
6. Write a report and give an oral presentation of an empirical study in geropsychology.

Course Content

The course content is organized around two intertwined pedagogical approaches.

Firstly, the course content provides a general introduction to common research paradigms and methods used in geropsychology, including, basic conceptions about scientific method, measurement, reliability, validity, quasi-experimental and observational designs, research settings, integrity, and ethics.

Secondly, this course provides the experience of executing research. Students will apply the basic concepts in a series of two projects and two short assignments. Students will gain hands-on practical experience in writing a research protocol/proposal, designing, and conducting quasi-experiments and observational studies, working with real data sets, processing, coding, analyzing the data using appropriate statistical techniques, writing up results, and making an oral research presentation.

Assessment

Component	ILO Tested	Related Programme Learning Outcomes or Graduate Attributes	Weighting	Team/Individual
1. CA1: Research Project 1	1, 4	Competence	30%	Individual
2. CA2: Assignment 1	2	Competence	10%	Individual
3. CA3: Assignment 2	3	Competence	15%	Individual
4. CA4: Research Project 2	5, 6	Competence, communication	45%	Team
		Total	100%	

CA1: Research Project 1 (30%)
You will complete a research study protocol and IRB forms that demonstrate your ability to formulate a sound research question/hypothesis, conduct a literature review, and design an empirical research study.

CA2: Assignment 1 (10%)
You will complete an online research ethics training and obtain the certificate of completion.

CA3: Assignment 2 (15%)
You will complete a written assignment that demonstrates your mastery of the PICOTS technique, PRISMA-P protocol, and PRISMA flowchart.

CA4: Research Project 2 (45%)
In teams, you will replicate/extend a published/publishable research study by collecting and analysing data and reporting the findings that are supported by your data.

Feedback
Students will receive verbal and written feedback for CA1 to CA4 on a continual fashion.

Learning and Teaching Approach
The class will be conducted in a seminar/webinar format with ample opportunities for discussions, and questions-and-answers. Each seminar/webinar will comprise an instructor-led lecture-and-discussion segment, followed by an in-class activity segment that prepares students for each CA.

The design, data collection, and reporting of the research projects provide the primary hands-on learning experiences of the entire research process.

The short assignments provide hands-on experiences in and exposure to focal areas in geropsychological research.

Readings

Week	Readings
1 to 3	Susan D. Shenkin, Jennifer K. Harrison, Tim Wilkinson, Richard M. Dodds, John P. A. Ioannidis, Systematic reviews: guidance relevant for studies of older people, Age and Ageing, Volume 46, Issue 5, September 2017, Pages 722–728, https://doi.org/10.1093/ageing/afx105

	Susan D Shenkin, Jennifer K Harrison, Tim Wilkinson, Richard M Dodds, John P A Ioannidis, Corrigendum: Systematic reviews: guidance relevant for studies of older people, Age and Ageing, https://doi.org/10.1093/ageing/afx185
4 to 7	MacDonald, S.W.S., Stawski, R.S., 2015. Chapter 2 - Methodological Considerations for the Study of Adult Development and Aging, Handbook of the Psychology of Aging, eighth ed. Elsevier Inc. https://doi.org/10.1016/B978-0-12-411469-2.00002-9. (E-book available through NTU library)
9 to 11	Gravetter, F. J., & Wallnau, L. B. (2017). Statistics for the Behavioral sciences (10th Edition). Belmont, CA: Thomson Wadsworth. (E-book available through NTU library) Newsom, J. T., Jones, R. N., & Hofer, S. M. (2012). Longitudinal data analysis: a practical guide for researchers in aging, health, and social sciences / edited by Jason T. Newsom, Richard N. Jones, Scott M. Hofer. (1st edition). Routledge. https://doi.org/10.4324/9780203814208 (E-book available through NTU library)
12 to 13	Nil

Course Policies and Student Responsibilities
You are expected to complete all assigned pre-class readings and activities, attend all classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments, and course related announcements for seminar sessions they have missed. You are expected to participate actively in the course, especially as audience in instructor-led lectures, and student-led flipped classroom segments.

Absence from class without a valid reason will affect your overall course grade and no makeup/extensions will be given unless there is a valid reason. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies.

Academic Integrity
Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion, and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Planned Weekly Schedule

Week	Date	Topics	Geropsychological issues	Hands-on Activities	Venue	CA Due
Foundations in geropsychological research						
1	9 Jan	Systematic reviews 1: evidence hierarchy, research/review questions, types of reviews	Major themes and trends	Review question formulation	Classroom	
2	16 Jan	Systematic reviews 2: review process	Heterogeneities: age, illness definition, including/exclusion criteria, study design, confounders, selection bias	PICOTS technique, PRISMA-P protocol, PRISMA flowchart	Classroom	
3		Research integrity		CITI certification	Online	
Research design						
4	30 Jan	Research design 1: (survey) observational and (quasi-) experimental designs	Applications in knowledge domains: socio-demographics, health (physical, mental), cognitive and psychosocial	IRB Study Protocol Form (Objectives, Questions/Hypotheses)	Classroom	CA2
5	6 Feb	Research design 2: cross-sectional, longitudinal, intensive measurement burst, and cross-lagged designs	Age and ageing effects	Research Study Protocol (Methods)	Classroom	
6	13 Feb	Sampling design and participant recruitment	Settings: household, community, formal care	Stratification matrix and Recruitment flowchart	Classroom	CA3
7	20 Feb	Questionnaire design: older persons and proxies	Length, measurement of health (physical, mental), cognitive, and psychosocial domains	Questionnaire design	Classroom	
Recess Week						
8	6 Mar	Key threats to validity: retest, attrition, missingness, and approaches	Frailty, death, living arrangements changes	Questionnaire design	Classroom	CA1
Research data management						
9	13 Mar	Data collection involving older persons and proxies	Detecting and dealing with fatigue and distress, proxy appropriateness	Data collection	Classroom, Computer lab	
10	20 Mar	Data analyses: observational, experimental, longitudinal data		SPSS data analyses	Classroom, Computer lab	
Presentation and reporting						
11	27 Mar	Presentation skills (oral, written)		Report writing	Classroom	
12		Seventh Edition APA Style		Academic Writer Tutorial	Online	
13	10 Apr	Student oral presentations		Oral presentations	Classroom	CA4