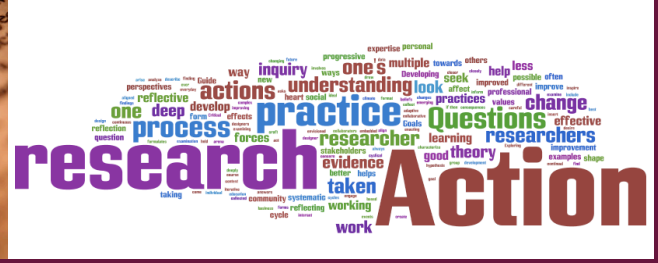


PNB 2XF3 Research Methods



Instructors: Dr. Joe Kim and Dr. Brett Beston

Teaching Assistants: Chris Slugocki, Michael Comishen, Swapna Krishnamoorthy

The goal of this course is to introduce you to the challenges, techniques and insights of conducting research in Psychology, Neuroscience & Behaviour. The global issues of research methods will be explored in the context of the history of psychology and philosophy of science. This approach is intended to complement the specialized content knowledge gained through PNB 2XA3 (Psychology), 2XB3 (Neuroscience) and 2XC3 (Behaviour).

Throughout the term of this course, faculty members from across PNB will give guest lectures that tie in with these themes. Speakers aim to provide the “story behind the story” to give you insight into the research process in action and expose you to current research conducted in the department. Tutorials will help you to prepare for these guest lectures where you will discuss assigned readings, next steps in research, and apply concepts to real world problems. The end of the term will culminate in the presentation of group research proposals.

Class Meetings

Lectures take place Wednesday and Thursday (as scheduled), 10:30-11:20AM, JHE/264

Tutorials take place Fridays (please note: *you must attend your assigned tutorial for full participation*)

T02 Fr 10:30 11:20 3 BSB/B206 Y
T03 Fr 11:30 12:20 3 BSB/B205 Y
T04 Fr 11:30 12:20 3 BSB/B206 Y
T05 Fr 12:30 13:20 3 BSB/B205 Y
T06 Fr 12:30 13:20 3 BSB/B206 Y
T07 Fr 13:30 14:20 3 BSB/B205 Y

Assessment

- | | |
|-----------------------------------|-----|
| 1. Tutorial participation | 10% |
| 2. Colloquium Preview | 20% |
| 3. In-class Quizzes (6, best 5/6) | 20% |
| 4. Research Presentation 1 | 20% |
| 5. Research Presentation 2 | 30% |
- (descriptions on next page)

1. **Tutorial participation (10%)**

Your TA will expect **active** participation in tutorial and Avenue to Learn (AVE) online discussion forums to create a dynamic learning environment. If you have specific issues with this process you must speak with your TA as soon as possible. Every three weeks over the course of 12 weeks of tutorials in each term, your TA will assign you a grade out of 10 using the rubric below. At the end of each term, your top 3 of 4 tutorials grades will be counted to calculate your final Tutorial Participation grade.

CONTRIBUTION TO TUTORIAL/ONLINE DISCUSSION					EVALUATING CONTRIBUTION	
	Excellent	Good	Fair	Poor	Excellent	
(3 of 3)	10	8	6	4	frequent, stimulating	
(2 of 3)	6-8	4-6	2-4	0-2	Good	frequent, valuable
(1 of 3)	4	2	0	0	Fair	occasional, forced
					Poor	infrequent, irrelevant

2. **Guest Lecture Preview (20%) - see attached rubric**

Prior to each guest lecture, one group (per tutorial) will be responsible for preparing the students in tutorial for the upcoming lecture. Your 25-30 minute presentation will include:

1. Presenting a brief biography, research background and interests of the guest speaker
2. Leading a discussion of journal article readings assigned by the guest speaker.
3. Preparing questions to facilitate discussions for generating research questions and how they can be answered.

****Please refrain from contacting faculty to discuss their biographies****

3. **In-class Quizzes (20%)**

Quizzes are to follow each guest lecture (on Wednesday's class). Test material may include all course material from the previous week (core lecture, guest lecture and assigned readings). Please note: i-clickers will be used for all quizzes.

Every student needs to purchase an iClicker and should bring it to every quiz date. iClickers can be purchased at the Titles campus bookstore and must be registered online with your name and McMaster student ID in order to receive participation credit for your iClicker response, see <http://www.bookstore.mcmaster.ca/textbooks/iclicker-faq.html>

4 and 5. **Research Proposal 1 and 2 (50%) - see attached rubric**

During the term, you will be exposed to the challenges, techniques and insights of conducting research in Psychology, Neuroscience & Behaviour. Each group will be given a case study in which members of each tutorial will identify questions related to psychology, neuroscience or behavior and design a research proposal to study it. Your 15 min presentation will include:

1. A description of the problem and current state of understanding in the literature
2. Identification of key researchable questions
3. Description of techniques that will be used to answer these questions
4. A discussion of the impact of the potential findings
5. Question and answer period from class.

The research proposals will be presented on Friday, October 19th and Friday, November 30th during tutorial hours.

Schedule of Topics

WEEK OF		WEDNESDAY	THURSDAY	FRIDAY
		Lecture	Guest Lecture	Tutorials
September	3 rd		Introduction to course	No Tutorial
	10 th	History of Psych and warm up to proposal (JK)		Introduction to tutorial <ul style="list-style-type: none"> • Preview sign-up • Divide into groups Proposal 1 group discussion
	17 th	Presentation Design (JK)- TedX		Preview 1/ Skill 1
	24 th	Defining Research (BB)	Oriane Landry	Preview 2/ Skill 2
October	1 st	Quiz 1 Decision making and interpretation (BB)	Steven Brown	Preview 3/ Skill 3
	8 th	Quiz 2 Media – Perception of science (JK)	Paul Andrews	Work on Proposal 1
	15 th	Quiz 3 Proposal Feedback		Proposal 1
	22 nd	Facilitating discussion (BB)		Preview 4/ Skill 4
	29 th	The business of science	Terri Lewis	Preview 5/ Skill 5
November	5 th	Quiz 4 Framing a research question (JK)	Shep Siegel	Preview 6/ Skill 6
	12 th	Quiz 5 Fallibility of science	Dave Shore	Proposal 2 group discussion
	19 th	Quiz 6 Proposal Feedback		Work on Proposal 2
	26 th	Proposal Feedback		Proposal 2

Colloquium Preview Presentation

Group Members:		Date:	
Preview Title:		Score:	/48
Missing	Poor (Below Expectation)	Fair (Changes needed)	Good (Minor Errors)
0	1	2	3
4			
Presentation Slides		Score	Comments
Narrative notes are engaging, concise and informative			
Images used are relevant and provide visual appeal			
Slides and narrative notes are complementary and do not compete with one another			
Structure and Content		Score	Comments
Presents biography of guest speaker			
Sets context of discussion topic and identifies key issues of research			
Identifies rationale of assigned papers			
Demonstrates and understanding of research hypothesis			
Conveys methodological approach used and how this helps to address research question			
Describes main results and how they support the hypothesis			
Draws audience to a clear conclusion of research findings			
Discussion Facilitation		Score	Comments
Prepared good questions and provided good direction			
Created discussion equally across all group members			

Research Proposal Presentation

Group Members:		Date:	
Proposal Title:		Score:	/44

Missing	Poor (Below Expectation)	Fair (Changes needed)	Good (Minor Errors)	Excellent (Meets / Exceeds Expectation)
0	1	2	3	4

Presentation Slides	Score	Comments
Narrative notes are engaging, concise and informative		
Images used are relevant and provide visual appeal		
Slides and narrative notes are complementary and do not compete with one another		

Structure and Content	Score	Comments
Sets context of discussion topic		
Describes current state of literature and what we don't yet understand		
Identifies key researchable questions / hypotheses		
Explains the approach / techniques that will be used to answer these questions		
Explains what results would support the research hypothesis		
Discuss the impact / main contribution of the potential finding		

Discussion Facilitation	Score	Comments
Facilitate discussion		
Prepared questions provide a solid foundation for discussion facilitation		