

## **Current Topics in Human Brain and Behaviour**

### **I) Course information**

Course number: PSYD66H3

Prerequisite: [ PSYB07H3 or STAB22H3 or STAB23H3] and [ PSYB55H3 or (PSYB65H3)] and [0.5 credit at the C-level in PSY courses]

Exclusion: PSY490H

Recommended Preparation: [(PSYB01H3) or (PSYB04H3) or PSYB70H3]

### **II) Instructor:**

Dr. Matthias Niemeier

1265 Military Trail

phone: 416-287-7466

e-mail: m.niemeier@utoronto.ca

Office Hours: tba

Also, I will have special office hours for everyone to help with preparations for their presentation in class. I request to please approach me about this at least one week before your presentation.

### **III) Course coverage and goals**

The temporoparietal junction (TPJ) is attributed numerous functions, including language, memory, attention, visual perception, action observation, multisensory body awareness, and social cognitions such as theory of mind. Whether these functions are underpinned by one overarching mechanism is highly debated given that there is evidence in favour of both functional overlap and functional division. The course provides a survey of the recent findings. Selected readings will cover neuroimaging, brain stimulation, and neuropsychological findings.

On a more general level PSYD66 is modeled after seminar courses in grad school as well as lab meetings in research labs. As such PSYD66 provides training in reading and understanding scientific articles, oral and written scientific communication, critical thinking, and grant writing.

By the end of this course, you will have ...

- developed an in-depth understanding of the contemporary scientific body of knowledge about the TPJ
- further strengthened your ability to consume scientific literature (especially original articles)
- become quite independent to acquire scientific knowledge
- increased your ability to understand, critique and extend original research in psychology and neuroscience
- further trained your ability to effectively communicate scientific knowledge to others

### **IV) Course Web Site: Quercus**

Here you will find the syllabus, instructions for the papers, the most up-to-date version of the lecture schedule, and announcements.

Please check on a regular basis for announcements.

## **V) Evaluation**

One aim of this course is to be closer to the real world of science than that is possible in a lecture. That is, there won't be exams nor a textbook. There won't even be a regular lecture. Instead, your presence in class and **active** participation in the course is expected and will be a significant part of the grade. We will have a reading list of original research papers (2 per week), and every week there will be presentations and discussions on them. Also, we will have assignments; there are three thought papers on the research papers from the reading list, and at the end of the course there will be a research proposal on a topic related to the TPJ.

**26% Presentation.** On one day you are asked to present one of the research papers for the respective day. The quality of your presentation will be crucial for your own and for everyone else's learning experience. You can earn these 30% within 20- 25 min, which is the length of your presentation. To be successful it needs to be a free presentation. You can use notes, but reading from a manuscript just doesn't work for your audience. The exact structure of the presentations will vary from article to article. But it should have the following parts:

- (a) a brief introduction to the topic (up to 3 min)
- (b) a summary of the methods, results and conclusions of the paper. (~15 min)
- (c) a summary of the discussion of the article (up to 2 min)

A group discussion will follow your presentation (not part of your grade). To choose a topic, please refer to the Schedule and the reading list. Topics will be assigned on a first-come-first-serve basis. Please email me your first 3 choices. Please contact me to set up a 1-hr appointment with me to prepare for your presentation.

**26% Active participation in the group discussions.** Every week you are expected to read the respective literature (2 papers) so that you are properly prepared to engage in discussions on them. The 30% emphasize that I value participation very much. Science lives from discussions. For this seminar it means that you need to say something in class that pertains to the respective topic. No worries, you don't need to make genius comments in class (but it doesn't hurt, of course). It is perfectly fine to convey any kind of thought of your own. For example: Do you agree with the authors? Do you have concerns about confounds or gaps in the study? Or maybe, were you impressed with something about the study? Do you have ideas about how to extend the research? Anything from your thought paper (see below) that you might want to share? Even if there was something in the paper that you didn't understand that could be worth talking about. There is a good chance that others had the same problem (but you get the credit for bringing it up). – Our discussions can be about many different things, and you will get a point for every session during which you contribute to those discussions. Speaking of "every session". Part of participating implies that you are present. Every week. That's the hitch of having no exams and no textbook. For more than one missed session I will need to factor this in, unless you submit a Request for Missed Term Work Accommodations form.

**15% Three thought papers (5% each).** Having read the weekly literature (2 papers) you also need to write thought papers about some of these articles. That means 2 double-spaced pages of your own thoughts. The purpose is (a) to encourage you to read the literature carefully and to prepare for the respective session of course (e.g., you may write a paper about a great idea and bring that same idea up during class), (b) to

practice scientific writing, (c) to encourage you to develop your own thoughts on the particular topic. ***Thought papers need to be submitted for the respective session during which the respective article is being discussed (email your papers as a Word doc before the start of the class; a deduction of 10% per every 24h of late submission).*** That is, if you write t-paper 1 on Igelström et al., you need to email your paper at the start of session 2. If you write your t-paper 1 on Binder et al., you need to email your paper at the start of session 3 etc. Please note that thought papers need to be structured in a specific way, see instructions on **Quercus** (“**How to write a thought paper**”).

There is a specific schedule according to which **you need to submit** your thought papers:

- **Thought paper 1:** at the start of session 2 (main submission date) or 3 or 4 or 5 (alternative submission dates)
- **Thought paper 2:** at the start of session 6 (main submission date) or 7 or 8 or 9 (alternative submission dates)
- **Thought paper 3:** at the start of session 10 (main submission date) or 11 or 12 (alternative submission dates)

**Please note that because there are multiple opportunities to submit thought papers, I will not accept any additional accommodation requests as detailed under VIII).**

Provided you submitted/ will have submitted 3 t-papers, i.e., a t-paper 1, 2, and 3, you have the option to improve your t-paper grade by submitting a fourth thought paper (that means, a second t-paper 1, a second t-paper 2, or a second t-paper 3 covering an article from a different session). In that event I will count your best 3 papers.

**33% Final exam.**

## VI) Schedule

Week	Topic	Literature
1	Introduction	
2	TPJ characterization (overlapping or separate functions?)	Carter & Huettel TICS 2013 Igelström et al J Neurosci 2015
3	language	Binder et al Cer Cor 2009 Matchin et al Hum Brain Mapp 2019
4	memory (memory retrieval vs. attention to memory model)	Huijbers et al PLoS ONE 2011 Cabeza et al J Cog Neurosci 2011
5	attention (updating & hemispheric asymmetry)	Vossel et al J Neurosci 2015 Dugué et al Cer Cor 2018
6	visual processes - general	Pollmann et al Neurolm 2014 Bloechle et al Neurolmage 2018
7	motor functions	Wolpert et al Phil Trans R Soc B 2003 Era et al Cer Cor 2019
8	embodied perspective taking	Wang et al Cortex 2016 Martin et al J Neurosci 2020
9	body awareness/self-other discrimination	Brass et al Phil Trans R Soc B 2009 Ionta et al Neuron 2011
10	social/theory of mind	Castelli et al Neurolm 2000 Gao et al Sci Rep 2019
11	ASD	Murdaugh et al Neurosci Lett 2014 Lancaster et al Front Hum Neurosci 2015
12	Schizophrenia	Fuentes-Claramonte et al Neurolm Clin 2020 Vucurovic et al J Psychi Res 2020

## VII) How to download the papers

I have listed links to the 22 papers in an Excel sheet that I will post on Quercus.

## VIII) Additional information

### Department of Psychology Missed Term Work Policy

For missed term work (assignments and term tests) due to illness, emergency, or other mitigating circumstances, please follow the procedure outlined below.

#### Procedure:

1. Complete the [Request for Missed Term Work Accommodations Form](#) ("MTW Form").
2. Email **BOTH** your MTW Form and Supporting Documentation to **<course email>** according to the instructions specified below.

#### Supporting Documentation Requirements and Deadlines:

Reason for Missed Work	Documentation required for a <b>first absence</b> in the term	Documentation required for <b>subsequent absences</b> in the term	Deadline for submitting MTW form and supporting documentation
Illness or Injury	<a href="#">ACORN</a> Absence Declaration	<a href="#">UofT Verification of Illness Form</a>	<b>WITHIN 2 BUSINESS DAYS</b> of the missed work
Bereavement	<a href="#">ACORN</a> Absence Declaration	A death certificate or funeral announcement	<b>WITHIN 2 BUSINESS DAYS</b> of the missed work
University-sponsored athletic or artistic obligation at the varsity/provincial/national level	<a href="#">ACORN</a> Absence Declaration	A note from a university staff member (advisor, coach, residence staff, etc.) who can substantiate the obligation, sent directly to the course email	<b>10 BUSINESS DAYS IN ADVANCE</b> of the missed deadline
Disability-related reasons for students registered with AccessAbility Services	For missed <b>TERM TESTS</b> , - <b>Contact your AccessAbility consultant</b> and have them write to the course email detailing the accommodations needed.  For missed <b>ASSIGNMENTS</b> , - If your desired accommodation is <b>within the scope</b> of your Accommodation Letter (e.g. your letter includes "extensions		<b>PREFERABLY IN ADVANCE OF THE MISSED WORK, OR AS SOON AS POSSIBLE</b>

	<p>of up to 7 days” and you need 3 days), send your <b>Accommodation Letter</b> to the course email and specify how many days extension you are requesting.</p> <ul style="list-style-type: none"> <li>- If your desired accommodation is <b>outside the scope</b> of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” but you need more time than that), <b>contact your AccessAbility consultant</b> and have them write to the course email detailing the accommodations needed.</li> </ul>	
Academic Conflict (e.g. two midterms at the same time)	Screenshot from Quercus demonstrating the conflict.	<b><u>10 BUSINESS DAYS IN ADVANCE</u></b> of the missed work
Religious Conflict	None required	

### **Notes:**

- The following reasons are not considered sufficient for missed term work: social activities, recreational travel, technological issues, avoidance of assessments or deadlines, work commitments
- [Missed Final Exams](#) are handled by the Registrar’s Office and should be declared on eService.
- For ACORN absence declarations, the date you declare the absence is required to fall within the seven-day declaration period (i.e.) the absence cannot be submitted proactively or retroactively.
- Instructors cannot accept term work any later than five business days after the last day of class. Beyond this date, accommodations are only possible via the Registrar’s Office [petition process](#).
- If you are unable to submit your request within the specified number of business days, you must still email your instructor within that window to explain the nature of the delay. Exceptions to the deadlines are made only under exceptional circumstances.
- Multiple assignments due on the same day are not considered academic conflicts. Students are expected to manage their time effectively to meet assignment deadlines.
- Back-to-back tests/quizzes are not considered academic conflicts. Only overlapping activities are conflicts.
- Students are responsible for keeping their course timetables conflict-free. Students who register in two courses with overlapping lecture/tutorial/lab schedules will not be accommodated.

### **Next Steps:**

After submitting your documentation, you will receive a response from your instructor or TA. The course instructor reserves the right to decide what accommodations will be made. Failure to adhere to any aspect of this policy may result in a denial of your request. **You are responsible for checking your official U of T email and Quercus course announcements daily**, as accommodations may be time-critical.

For missed assignments, **do not wait for the instructor's response to resume work on your assignment**. Extensions may be as short as one business day, depending on the nature of the illness/emergency. Complete your assignment as soon as you're able, and email it to your instructor.

If an accommodation is granted but a continued illness/emergency prevents you from meeting its requirements, you must repeat the missed term work procedure to request additional accommodations. **Please make it clear in your subject line that you are requesting a second accommodation**. Examples: If you were granted an extension for a paper but are still unable to meet the new deadline, or if you miss a make-up term test, you must submit *another* MTW form and supply documentation according to the "subsequent absences" column in the chart above. \*Note: In the case of a missed make-up test, an opportunity to write a second make-up test may not necessarily be provided.

### Help With Writing

If you would like help with academic writing, the following resources are available to you:

- The Centre for Teaching and Learning (AC312) Writing Centre offers students one-to-one appointments and supplementary materials to help improve upon their writing skills.  
<http://ctl.utoronto.ca/home/> <http://ctl.utoronto.ca/twc/>

- The English Language Development Centre offers support and specialized writing programs for students who do not speak English as their primary language.  
<http://ctl.utoronto.ca/eld/>

- Advice on academic writing

<http://www.writing.utoronto.ca/advice>

### Academic Integrity

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters ([http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/P DF/ppjun011995.pdf](http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/P%20DF/ppjun011995.pdf)) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

Using someone else's ideas or words without appropriate acknowledgement;  
Submitting your own work in more than one course without the permission of the instructor;

- Making up sources or facts;
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

- Using or possessing unauthorized aids;
- Looking at someone else's answers during an exam or test;
- Misrepresenting your identity; and
- When you knew or ought to have known you were doing it.

In academic work:

- Falsifying institutional documents or grades;
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes; and
- When you knew or ought to have known you were doing so. All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If students have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, they are expected to seek out additional information on academic integrity from their instructors or from other institutional resources. Note: You may see advertisements for services offering grammar help, essay editing and proof-reading. Be very careful. If these services take a draft of your work and significantly change the content and/or language, you may be committing an academic offence (unauthorized assistance) under the *Code of Behaviour on Academic Matters*. It is much better and safer to take your draft to the Writing Centre as early as you can. They will give you guidance you can trust. Students for whom English is not their first language should go to the English Language Development Centre. If you decide to use these services in spite of this caution, you must keep a draft of your work and any notes you made before you got help and be prepared to give it to your instructor on request.

### **Use of Generative Artificial Intelligence Tools**

Students may **not** use artificial intelligence tools for writing thought papers, writing a script for their presentation, or for their research proposal. However, these tools may be useful when gathering information from across sources and assimilating it for understanding.

The knowing use of generative artificial intelligence tools, including ChatGPT and other AI writing and coding assistants, for the completion of, or to support the completion of, an examination, term test, assignment, or any other form of academic assessment, may be considered an academic offense in this course.

### **AccessAbility Services**

Students with diverse learning styles and needs are welcome in this course. In



particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services as soon as possible. AccessAbility Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca). The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

### **Literature Searches**

Students can use the following resources when conducting literature searches to find relevant articles for their presentation and final essay:

The UTSC Library (AC235)

<http://www.library.utoronto.ca/utsc/>

PubMed

<http://www.ncbi.nlm.nih.gov/pubmed>

PsychINFO

<http://www.apa.org/pubs/databases/psycinfo/index.aspx>

Google Scholar

<http://scholar.google.ca/>

### **For Your Health**

The Health and Wellness Centre (SL270, 416-287-7065) provides diagnostic, treatment and referral services for all illnesses ranging from the medical to psychological to health promotion. The professional staff of physicians, nurses and counselors provides personal advice and assistance with family issues, eating disorders, depression, stress, drug and alcohol abuse, relationship issues, a positive space for gender/sexuality issues, and more.

<http://www.utsc.utoronto.ca/wellness>