

# COURSE SYLLABUS

## PSYCHOLOGY 368(001): Perceptual Processing, Term 2 2021W

**Calendar Description:** Perceptual phenomena and their underlying brain mechanisms  
[3 credits]

**Prerequisites:** Psyc 367

### Contacts

**Instructor:** Professor Debbie Giaschi

email: [deborah.giaschi@ubc.ca](mailto:deborah.giaschi@ubc.ca)

phone: (604)875-2345x7807

office hours: Tues. 12:30-1:30 pm; Kenny 4218 (after Feb. 7<sup>th</sup>) & [Zoom via Canvas](#)

**Teaching Assistants:** Zahra Kheradmandsaadi

Alex Cook

hours: Thursdays 1 – 2 pm

Wednesdays 1 – 2 pm

office: [Zoom via Canvas](#) until further notice [Zoom via Canvas](#) until further notice

We are easily reached through [Canvas](#) using [Piazza](#). **All questions** about lecture material, readings and exam content should be posted publicly for the rest of the class to see; you may choose to remain anonymous to your classmates. Questions of a personal nature should be posted privately for only Dr. Giaschi or the TAs to see. Please **sign up** at [piazza.com/ubc.ca/winterterm22022/psyc3680012021w2](https://piazza.com/ubc.ca/winterterm22022/psyc3680012021w2)

### Learning Activities and Materials

**Lectures:** Tues. & Thurs., 11:00 am - 12:20 pm in IBLC-182 ([Zoom via Canvas](#) Jan 11 – Feb 3)

**Textbook:** *Sensation & Perception, 6th edition* (2021) by J. Wolfe, K. Kluender, D. Levi et al.

Note: this is the same book that was used in Psyc 367 last term

(hardcover new ~\$213 or 180-day ebook rental ~\$75 [shop.bookstore.ubc.ca/courselistbuilder.aspx](https://shop.bookstore.ubc.ca/courselistbuilder.aspx); 12-month ebook rental ~\$90 [vitalsource.com/en-ca/products/sensation-and-perception-jeremy-wolfe-keith-kluender-v9780197542705](https://vitalsource.com/en-ca/products/sensation-and-perception-jeremy-wolfe-keith-kluender-v9780197542705); 1 copy on 2-hour loan in Koerner Library Course Reserves; 1<sup>st</sup> [2006], 2<sup>nd</sup> [2009], 3<sup>rd</sup> [2012], 4<sup>th</sup> [2015], 5<sup>th</sup> [2018], and international editions are **not** suitable)

**Learning Management System:** [canvas.ubc.ca](https://canvas.ubc.ca)

(to access: downloadable files [course syllabus, lecture outlines + objectives, lecture slides]; [Panopto](#) [live-streamed lectures starting Feb 10]; textbook demonstrations; library [research project articles, textbook excerpts]; [Piazza](#) [peer, professor & TA discussions]; [Zoom](#) [synchronous lectures & recordings Jan 11-Feb 3, office hours]; grades)

### Assessment of Learning

Midterm Exam 1 (Feb 8)	25%
Midterm Exam 2 (Mar 15)	25%
Final Exam (Apr 12-27)	35%
Research Project Paper (Apr 7)	15%
<b>Total</b>	<b>100%</b>
Human Subject Pool participation	3%

*Note: supplemental exams to improve your grade are not offered in any course in the Faculty of Arts.*

## PSYCHOLOGY 368(001): Perceptual Processing

### Course Details

**Course Learning Outcomes:** This course will provide you detailed knowledge about:

- object perception; colour vision; depth perception; motion perception;
  - eye movements; spatial orientation perception;
  - attention;
  - haptic perception;
  - hearing complex sounds; speech and music perception;
- through lectures, readings, in-class demonstrations, and a research project.

**Readings and Lectures:** All lectures will be given live at the scheduled class time. For the first 4 weeks of the term, the class will meet on [Zoom via Canvas](#). For the remainder of the term, the class will meet in person; these lectures will be live streamed in webinar format (no live discussion) to allow you to watch from home on [Canvas \(Modules \[Panopto\]\)](#) if you are unwell. Lecture recordings will be available at the end of each week for viewing on [Canvas](#), assuming no technical glitches occur. Recordings are not meant to replace in-person lectures. Students will not appear in these recordings unless they approach the lecture podium. A version of the lecture slides will be available on [Canvas \(Modules\)](#) the evening before each lecture to facilitate your preparation and note taking, but these slides may not be identical to the ones shown during class. In addition, some of the material covered in lectures is not in the textbook, and some of the material in the textbook will not be covered in lectures. It is recommended that you both attend lectures and read ahead in the textbook (see Schedule on page 4). When it comes to the exams, you are responsible for ALL material covered in lectures and ALL material assigned from the textbook including figures, definitions, boxes and summaries. The textbook is required reading. *Photographing, screenshotting, video or audio recording of lectures or exams is not permitted at any time.*

**Lecture Objectives:** Statements indicating what you should learn in the lectures and readings will be included on the first slide for each lecture and in the lecture outline, which will be available on [Canvas \(Modules\)](#) the evening before. These objectives are to guide your studying and to make it unnecessary for you to ask us what you need to know for the exams. Many students choose to treat each objective as an exam question and attempt to answer it. We recommend this method of studying, but we do not have a list of correct answers.

**Human subject pool (HSP) participation:** To learn more about psychology and earn up to 3 bonus points toward your course grade, you may participate in research projects between January 10 and April 8. The projects are posted at [ubc-psych.sona-systems.com](http://ubc-psych.sona-systems.com). Please register in this online system by the end of January. You can earn your first ½ point by completing a pretesting survey that will make you eligible for a wider variety of studies. As an alternative to participating in studies, you may complete a library writing project which consists of reading and summarizing a research article from the journal *Psychological Science*. Each written summary counts as 1 hour of participation, and must be submitted using Turnitin (class ID is 33005051, class name is “HSP 2021-2022 (Spring)”, password is “Research”). More information on both research participation and the library option can be found at [psych.ubc.ca/hsp](http://psych.ubc.ca/hsp). **Be sure to check your recorded bonus points for this course before the online system closes at the end of the term.** These points will be added to your final course grade, after any scaling that may be required.

## PSYCHOLOGY 368(001): Perceptual Processing

### Course Details continued

**Exams:** The current plan is for all exams to be in person with no online option. This is to promote academic honesty and to provide closer-to-normal learning assessments. Should additional COVID-19 restrictions prevent in-person classes from resuming by the scheduled exam dates, exams will be on **Canvas** (*Quizzes*) with Zoom invigilation; cameras will be required to remain on throughout each exam. The midterm exams will occur during the scheduled class time (dates & topics – page 4). The final exam will occur during the formal exam period (Apr 12-27). Each exam will consist of multiple-choice and short-answer questions. The midterm exams will be noncumulative; the final exam will cover the entire course. Marks will be posted on **Canvas** (*Grades*) as soon as they are available. Exams will not be returned to you. Correct answers will be reviewed in class, but this part of the lecture will not be live-streamed or recorded. Incorrect answers may be reviewed with TAs during office hours. Students are expected to use the terminology (and spelling) introduced in this course in their short answers.

**Accommodations:** If you will be seeking accommodation through the *Centre for Accessibility*, please provide your accommodation letter to Dr. Giaschi as soon as possible, and before the first exam. Exams for all students receiving accommodation must be scheduled through the Centre and booked according to their rules and deadlines. If you anticipate a *religious or cultural observance* will conflict with a test, at least 2 weeks advance notice must be provided to Dr. Giaschi in writing. If you have *conflicting responsibilities* that will interfere with your attendance in this course, please discuss this with Dr. Giaschi as soon as possible and before the course drop date (Feb 6); supporting documentation may be requested.

**In-Term Academic Concession:** If you need to miss an exam due to conflicting responsibilities, medical circumstances or compassionate grounds (refer to UBC calendar entry: [www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0](http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0)), you must request academic concession through self-reporting and also **let Dr. Giaschi know**. The procedure for submitting request forms depends on your Faculty as follows:

*Arts 1st request* (to Dr. Giaschi) - [Student-Self-Declaration-Form-1.6-Arts.pdf](#) 

*Arts 2nd request* (online) - [students.air.arts.ubc.ca/academic-concession-form/](http://students.air.arts.ubc.ca/academic-concession-form/)

*Science* (to Dr. G.) - [Template - In-Term Academic Concessions Self Declaration, 2019.pdf](#) 

*Kinesiology* (online) - [kin.educ.ubc.ca/undergraduate/bkin/academic-concession/concession-itw/](http://kin.educ.ubc.ca/undergraduate/bkin/academic-concession/concession-itw/)

You should not take an exam when you are unwell. **There will be no make-up midterm exams.** Instead, if concession is granted, that 25% of your final grade will be equally distributed across the other exams. Concession will **not** be granted for: an exam that you have already taken, absences due to travel or other social plans or exam conflicts with other courses. If you request concession for more than 1 exam, you will be referred to your Faculty advising office.

**Final Exam Concession:** If you are unable to write the final exam as scheduled, you must apply for deferred standing in the course through your Faculty academic advising office. If you are granted deferred standing (SD), you must write a make-up final exam at a later date. **Do not make April travel plans until the final exam schedule is released in February.**

**Research projects:** See pages 7-8 for a general overview of the research project to be conducted outside of class time.

## PSYCHOLOGY 368(001): Perceptual Processing

### Lecture Schedule and Assigned Readings

Date	Topic	Reading
1. Jan 11	Intro; Object perception: middle vision	Chpt 4 (p 100-109)
2. 13	Object perception: recognition	Chpt 4 (p 109-124; web essay 4.1)
3. 18	Object perception: faces, physiology	Chpt 4 (p 93-100,124-127;web essay 4.4)
4. 20	Colour vision: stimuli, trichromacy	Chpt 5 (p 131-143)
5. 25	Colour vision: opponency, deficiency	Chpt 5 (p 143-152; web essay 5.1)
6. 27	Colour vision: cortical processing	Chpt 5 (p 152-163; web essay 5.3, 5.4)
7. Feb 1	Depth perception: cues	Chpt 6 (p 167-181)
8. 3	Depth perception: binocular vision	Chpt 6 (p 181-193)
	8 <b>Midterm Exam 1</b> (in person)	<b>Jan 11 – Feb 3 material</b>
9. 10	Depth perception: brain,development,disorders	Chpt 6 (p 193-197; 202-208)
10. 15	Depth perception: size constancy	Chpt 6 (p 197-201; web essay 6.6)
11. 17	Motion perception: types, computation	Chpt 8 (p 249-256)
	<b>22 &amp; 24 Midterm Break</b>	
12. Mar 1	Motion perception: brain	Chpt 8 (p 256-260; web essay 8.3)
13. 3	Motion perception: uses,disorders,eye movements	Chpt 8 (p 260-271)
14. 8	Spatial Orientation Perception	Chpt 12 (p 384-391)
15. 10	Attention: space	Chpt 7 (p 211-224; web essay 7.3)
	15 <b>Midterm Exam 2</b> (in person)	<b>Feb 10 – Mar 10 material</b>
16. 17	Attention: time, brain	Chpt 7 (p 224-231)
17. 22	Attention: disorders, scenes	Chpt 7 (p 231-245; web essay 7.1)
18. 24	Haptic perception	Chpt 13 (p 434-448)
19. 29	Perception of complex sounds <i>research project data due</i>	Chpt 10 (p 320-333)
20. 31	Music perception	Chpt 11 (p 335-343)
21. Apr 5	Speech production	Chpt 11 (p 343-349)
22. 7	Speech perception <i>research project paper due</i>	Chpt 11 (p 349-361; web essay 11.1)
12-27	<b>Final Exam</b> (2 hours)	<b>Jan 11 - Apr 7 material</b>

web essays and textbook demonstrations can be found through **Canvas** (*Modules*), your ebook or at [oup-arc.com/access/sensation-and-perception-5e-student-resources](http://oup-arc.com/access/sensation-and-perception-5e-student-resources)

**Acknowledgements:** The land on which our class will be meeting is the traditional, ancestral, and unceded territory of the Musqueam people. Dr. Giaschi lives and works on the traditional territories of the Musqueam, Squamish and Tsleil-Waututh peoples. The Canvas course entitled [Respect, Sincerity & Responsibility](#) is a good place to start learning about respectful engagement with Indigenous communities.

## PSYCHOLOGY 368(001): Perceptual Processing

### Departmental and University Policies

**Scaling of grades:** In order to reduce grade inflation and maintain equity across multiple course sections, all psychology classes are required to comply with departmental norms regarding grade distributions. According to these norms, the mean grade in a 300-level class is 75 for an exceptionally strong class, 73 for an average class, and 71 for a weak class, with a standard deviation of 13. Scaling may be used in order to comply with these norms; grades may be scaled up or down as necessary by the professor or the department. Grades are not official until they appear on a student's academic record. You will receive both a percent and a letter grade for this course. At UBC, they convert according to the key below:

A+	90-100%	B+	76-79%	C+	64-67%	D	50-54%
A	85-89%	B	72-75%	C	60-63%	F	0-49%
A-	80-84%	B-	68-71%	C-	55-59%		

**Student support:** UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment, discrimination and racism are not tolerated, nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on [senate.ubc.ca/policies-resources-support-student-success](https://senate.ubc.ca/policies-resources-support-student-success). UBC's evolving anti-racism work is described at [equity.ubc.ca/together-against-racism/](https://equity.ubc.ca/together-against-racism/)

**COVID-19 safety:** You are required by provincial mandate to wear a non-medical mask during our class meetings, for your own protection and for the safety and comfort of everyone else in the class. Non-medical masks that cover our noses and mouths are a primary tool for combating the spread of COVID-19. **If you come to class without a mask, you will be asked to put on a mask or leave.** Masks are available throughout Buchanan including Arts Advising. If you wish to request an exemption to the indoor mask mandate it must be based on one of the grounds for exemption detailed in [the PHO Order on Face Coverings \(COVID-19\)](#). Such requests must be made through the Center for Accessibility ([info.accessibility@ubc.ca](mailto:info.accessibility@ubc.ca)). If you've been approved for a mask exemption or are waiting for a decision on your request, you are welcome in class but please inform Dr. Giaschi by email before attending class. Instructors have permission from the Provincial Health Officer to remove masks while teaching if they can stay 2m away from students. **Please refrain from eating during class**; please keep your mask on between sips if you are drinking fluids.

**If you feel unwell** (complete a self-assessment here: <https://bc.thrive.health/covid19/en>) or if you have tested positive for COVID-19, **please stay home** and watch the live-streamed lectures. If you feel unwell on an exam day, apply for in-term concession and email Dr. Giaschi ahead of time. Your teaching team will not come to class if they are unwell. Should Dr. Giaschi need to stay home, you will be notified through a **Canvas** announcement; the lecture will be given during class time on **Zoom** if possible, otherwise a recording will be posted on **Canvas**.

*Please help us to maintain a safe and respectful environment.*



## PSYCHOLOGY 368(001): Perceptual Processing

### *Academic Integrity*

As part of the academic community, you are expected to act honestly and ethically in all of your academic activities, just like the rest of us. In Psyc 368 that means doing your own work, avoiding collusion, not using aids that have been excluded by the examiner, not sharing material provided for you to use in this course, and acknowledging the ideas of others (more details on each of these below).

Make sure you understand UBC's definitions of [academic misconduct](#), [consequences](#), as well as expectations about [academic honesty](#). *Please ask if you're not sure how these apply to our course.* While you're checking out the calendar, you should also remind yourself about the "[Student Declaration and Responsibility](#)" statement you agreed to when you registered.

**DO your own work.** All individual work that you submit should be completed by you and submitted by you. All assessments are designed to help you learn about Perceptual Processing. It is *unacceptable* to use an editor (paid or unpaid) to revise, correct, or alter your work, because your submission is no longer your own work. It is *unacceptable* to misrepresent your identity by using someone else to complete any portion of this course (e.g., comment on Piazza, complete an exam question). It is *unacceptable* to buy/sell/swap/share exam questions or answers on any platform. It is *unacceptable* to help someone else cheat.

**AVOID collusion.** Collusion is a form of academic integrity violation that involves working too closely together without authorization. The resulting submitted work gains unfair advantage over other students because it is a measurement of the group's understanding rather than the individual's understanding. Studying together does not count as collusion, but working together to write answers or answering someone else's question in a chat app, on either open- or closed-book exams, is considered to be collusion. You are expected to take exams and complete your research project on your own without any type of assistance.

**DO NOT use aids that have been excluded by the examiner.** Unless otherwise explicitly specified, all exams in Psyc 368 will be closed book. This means you may not use notes, lecture slides, books, calculators, websites, chat rooms etc. to look up answers to exam questions. Please be aware that student activity captured by **Canvas** during exams can be used to detect many instances of cheating.

**DO NOT share materials provided for you to use in this course.** We are working hard to provide all the materials you need to succeed in this course. In return, please respect our work. All exam questions and answers, Piazza posts, announcements, lecture slides and outlines, audio/video recordings, Canvas modules, and any other materials provided to you by Dr. Giaschi and the TAs or in the textbook and other readings are for use in this course by students currently enrolled in PSYC 368. It is *unacceptable* to share any of these materials beyond our course, including by posting on file-sharing websites (e.g., CourseHero, GoogleDocs). It is *unacceptable* to copy and paste sentences from the textbook (e.g., definitions) into for-profit software (e.g., Quizlet) for use in studying. Please respect our intellectual property, and follow copyright law.

**DO acknowledge the ideas of others and avoid plagiarism.** Scholars build on the work of others, and give credit accordingly—this is a quality of strong academic writing. As an example, most of these academic integrity principles were adapted from material prepared by Dr. Catherine Rawn. In Psyc 368, formal citing of sources will be required for your research project paper. Do not copy and paste text from other sources, including other students' work.

## PSYCHOLOGY 368(001): Perceptual Processing

### General Overview of Research Projects

Students will use the web-based PsyToolkit software for this research project <https://www.psychtoolkit.org/>. The project will be conducted outside of class time.

#### 1. choose a research topic:

Each student will choose 1 of the following 4 topics:

- global vs. local object processing: exploring the global precedence effect using Navon letters (*Navon task*)
- attending in space: exploring covert orienting of attention and inhibition of return using a cost-benefit experiment (*Inhibition of Return (IOR)*)
- visual search: exploring the effect of set size on search time for a conjunction of features (*Visual Search*)
- attending in time: exploring speed limits of attention using a modified attentional blink paradigm (*Attentional Blink paradigm*)

To help you decide, demonstrations and background information for each experiment are available at <https://www.psychtoolkit.org/experiment-library/>

#### 2. read the background journal article(s) on your topic:

These are available on **Canvas** (*Assignments and Library Online Course Reserves*).

- global vs. local object processing: 1. Navon, D. (1977) Forest before trees: the precedence of global features in visual perception. *Cognitive Psychology*, 9:353-383. (Expt 3 classic); 2. Kinchla, R. & Wolfe, J. (1979). The order of visual processing: “top-down”, “bottom-up”, or “middle-out”. *Perception & Psychophysics*, 25:224-231. (Fig 2b comparison)
- attending in space: 1. Posner, M. & Cohen, Y. (1984). Components of visual orienting. *In: Attention and Performance Vol X* (Bouma and Bouwhuis, eds.) pp. 531-556, Erlbaum. (Fig 32.2 + 32.3 classic & comparison)
- visual search: 1. Treisman, A. & Gelade, G. (1980) A feature-integration theory of attention. *Cognitive Psychology*, 12:97-136. (Expt 1 classic & comparison)
- attending in time: 1. Raymond, J., Shapiro, K. & Arnell, K. (1992). Temporary suppression of visual processing in an RSVP task: an attentional blink? *Journal of Experimental Psychology: Human Perception and Performance*, 18:849-860. (Expt 2 classic); 2. Duncan, J., Ward, R. & Shapiro, K. (1994). Direct measurement of an attentional dwell time in human vision. *Nature*, 369:313-315. (Expt 2 comparison)

You will include a summary of the main findings of the background article(s) in the Introduction to your research paper.

#### 3. collect and analyze data:

Each student will collect a set of data on themselves or a friend/family member (if COVID restrictions permit). Detailed instructions for running the PsyToolkit experiments are provided in a separate document on Canvas (Assignments). Analysis will involve sorting the data into conditions and plotting them in a graph for comparison with previous studies.

#### 4. upload raw data:

Your trial-by-trial data should be downloaded from the PsyToolkit website in a .txt file, then uploaded to **Canvas** (*Assignments*) before class on **Tuesday, March 29**.

## PSYCHOLOGY 368(001): Perceptual Processing

### General Overview of Research Projects continued

#### 5. prepare a research paper:

Each student must hand in their own unique research paper based on their data set. Organize your paper with clearly labeled Introduction (include a description of the classic psychological phenomenon [from background article(s), lecture/textbook material], a summary of the main findings of the comparison background article on your topic [see 2. above], a typical explanation for why the phenomenon occurs); Methods (for your **PsyToolkit** experiment: describe the stimuli, task, viewing conditions, number of trials, what you measured [dependent variable]; include enough detail for someone to recreate your experiment without using the **PsyToolkit**); Results (describe how the data were analyzed; summarize your raw trial-by-trial data in a table that shows the average of the dependent variable for each condition; plot these averages in a graph and compare the pattern of your results to the one obtained in the comparison experiment); Discussion (describe the extent to which you replicated the classic phenomenon; point out any differences between your **PsyToolkit** experiment and the comparison one, and how these might have affected your ability to replicate the classic phenomenon; discuss whether or not your results are consistent with the typical explanation for the phenomenon; review what is known about the underlying brain mechanisms for your phenomenon based on animal neurophysiology and human neuroimaging studies [cite at least 2 journal articles in addition to the background article(s)]; Reference list (include a full reference citation for each journal article [authors, year, title, journal, volume, page numbers]; do not list an article unless you have cited it). There is no specific format to follow; the limit is 5 double-spaced pages (12-pt font, 2 cm margins) + 1 page for graphs + reference list. You may have difficulty finding suitable references if you restrict your search to Google Scholar. You will have more success with the indexes and databases available through the UBC Library [www.library.ubc.ca](http://www.library.ubc.ca). Web of Science is the best tool to search forward to find articles that cite your background article.

#### 6. submit your paper to TurnItIn to check for plagiarism:

To submit your paper on [www.turnitin.com](http://www.turnitin.com), you will need to create a unique user profile, consisting of a username (e-mail address) and password. To protect your privacy, UBC recommends creating an anonymous email address using a free service (gmail, hotmail, etc.), and using an alias or pseudonym instead of your name. This alias must be included on the paper you upload to **Canvas** for marking. At the top right of the **TurnItIn** website, go to **Create Account** and select **Student**. Enter the **Class ID (33062160)** and **Enrolment Password (paper)** for this course. Prior to uploading, please **delete any identifying information** from the original document. This includes your name and student number in the document and title, as well as any metadata or hidden data that might be stored in the document itself. You can remove metadata from your Microsoft Word document using [Document Inspector](#) (Windows) or by clicking on **Word > Preferences > Security**, then selecting **Remove personal information from this file on save** (Mac). Your similarity index should be in the green zone. Revisions may be submitted until the due date, providing the same email address/TurnItIn account is used.

#### 7. upload your paper to Canvas:

The final version of your paper should be uploaded to **Canvas (Assignments)** before class on **Thursday, April 7**. If you used an alias for your **TurnItIn** submission, be sure to include it at the top of the first page of your paper.

**Late assignments:** A 3-day extension (until April 10) may be requested; after that a penalty of 10% per day will be applied. Assignments received after April 17 will not be marked.