

Selected Topics in Real-World Scene Perception

PSYC423 / PSYC833:

Fall Session, 2016

Syllabus

Tuesday, 1:00pm-2:30pm; Thursday, 11:30am-1:00pm
Macintosh-Corry Hall, rm D326

Instructor: Dr. Monica Castelhana

Office: Humphrey Hall, room 346

Email: monica.castelhana@queensu.ca

Office Hours: Wednesdays 10:00am-11:30pm (or by appointment)

Learning Objectives

To complete this course students will demonstrate their ability to:

- Summarize current theories visual cognition with a special emphasis on scene processing, object recognition, visual attention, eye movements, visual memory and related applied fields
- Critically evaluate current, experimental literature in the field of visual cognition
- Develop writings skills
- Summarize and communicate research findings in one area of visual cognition
- Generate new research question in the field of visual cognition

Course Format

Each week will focus on a particular topic. Generally, Tuesday class will introduce you to a new topic with two-three readings per week and a Reaction paper. You will have the opportunity to share your thoughts written in reaction papers during the Tuesday class. Readings and reaction papers must be completed prior to the Tuesday class.

During the Thursday class, students will lead discussion on an article of their choosing related to that week's topic.

Readings

There is no textbook. Articles will be assigned to be read for each class. You will be able to download the articles from the web/library – use your research skills! Any articles not available through the school library system will be provided on onQ.

Workload

Participation

Participation is always good in a seminar class! Participating and presenting go hand in hand, and speaking up in class will help you as well as your classmates (when they're presenting or you are). All criticisms/comments/questions are encouraged.

Reaction Paper

Each week you will be required to submit (via *onQ*) a Reaction Paper. Typically, it will be **no more than 1 page long** (more than that and you are doing too much). The reaction paper is meant to show me that you have done the readings and that you have **thought about them**. I am interested in *your* ideas – not the authors'. **A summary of the experiment is not enough**. You are encouraged to come up with something you thought of while reading, a critique of the experiment, theoretical question about the experiment, or a possible next step for future studies.

Reaction papers are **due by 9pm each Monday** prior to Tuesday class; however, the first reaction paper is due Wednesday, September 29, 2016 at 9pm. **No Exceptions** will be made for late reaction papers.

Grading of Participation and Reaction Papers is based on Young's I-C-E (Ideas, Concepts, and Extensions):

- **3/3** Comments and responses reveal a capacity to analyze, synthesize, and evaluate material and give evidence of original thinking and an extensive knowledge base. They demonstrate a careful, concise, critical analysis with a clear and well-argued hypothesis based on the material. They exhibit evidence of learning that is willing to explore beyond the initial learning situation.
- **2/3** Comments and responses reveal a good analysis and some critical reasoning. They demonstrate a reasonable understanding of relevant issues and familiarity with the material. They demonstrate a solid understanding of the relationship or connections among the basic concepts. They show a need to be more concise or precise in details and more careful in articulating arguments.
- **1/3** Comments and responses show an acceptable treatment of the subject matter. They demonstrate an understanding of the basic facts, vocabulary, details, and elemental concepts and show an ability to deal with simple issues arising out of the material. The student needs to engage the subject matter more fully and formulate ideas more clearly.

Presentations

You will lead two discussions in the class in which you will present a new article related to that week's topic and provide a 5-10 minute presentation of that article during Thursday's class.

This will not be a PowerPoint presentation. Instead, provide a **one page handout** with the key figures and verbally summarize the rationale for the study, the method, and the key findings as well as at least 5 questions that can be presented to the class to stimulate discussion.

Research Proposal

On **Monday December 5th at 5pm**, you will be required to submit a research paper (15 pages max) on a topic of current interest within the field of scene perception/scene processing. The final paper will include a review of past research relevant to your topic, and a proposal for future research (i.e., a new experiment). Late papers will be penalized 10% per day. More information will follow.

You need to choose your topic and hand-in a **one paragraph summary** (1/2 page long max) describing your idea for the final paper on **Friday November 11th at 5pm**. This half-page

summary will be included in your research proposal grade. There will be a writing tutorial with an opportunity for feedback on your proposal the following week.

Evaluation

Class Participation	20%
Reaction Papers	15%
Presentation/Discussion	25%
Research Proposal	40%

Grading Method

All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale:

Queen's Official Grade Conversion Scale

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

Academic Integrity

Don't cheat – it's really not worth it. The penalty for getting caught is getting kicked out of university. It's not worth it.

Here is the official version:

Academic Integrity is constituted by the six core fundamental values of honesty, trust, fairness, Respect, responsibility and courage (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of

the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities

<http://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities>).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar, and on the Arts and Science website. You can also ask me questions regarding academic integrity. Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulations on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

<http://www.queensu.ca/academicintegrity/students.html>

Accommodation Statement

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Wellness Services (SWS) and register as early as possible. For more information, including important deadlines, please visit the Student Wellness website at:

<http://www.queensu.ca/studentwellness/accessibility-services/>

Copyright Statement

This material is copyrighted and is for the sole use of students registered in PSYC 423. This material shall not be distributed or disseminated to anyone other than students registered in PSYC 423. Failure to abide by these conditions is a breach of copyright, and may also constitute a breach of academic integrity under the University Senate's Academic Integrity Policy Statement.

Course Schedule

Day	Date	Topics	Readings & Assignments
Tuesday	13-Sep	Organizational meeting and Introduction to Scene Processing	
Thursday	15-Sep	Initial Perception of Scenes	<p>Oliva, A. (2005). Gist of the scene. <i>Neurobiology of attention</i>, 696(64), 251-258.</p> <p>Intraub, H. & Richardson, M. (1989). Wide-angle memories of close-up scenes. <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i>, 15, 179-187.</p> <p>Reaction Paper #1 Due</p>
Tuesday	20-Sep	Memory for Scenes	<p>Standing, L. et al (1970). Perception and memory for pictures: single-trial learning of 2500 visual stimuli. <i>Psychological Science</i>, 19, 73-74.</p> <p>Konkle, T., Brady, T. F., Alvarez, G. A., & Oliva, A. (2010). Scene memory is more detailed than you think the role of categories in visual long-term memory. <i>Psychological Science</i>, 21(11), 1551-1556.</p> <p>Reaction Paper #2 Due</p>
Thursday	22-Sep		Presentations (Group 1)
Tuesday	27-Sep	Photos and False Memories	<p>Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. <i>Psychonomic Bulletin & Review</i>, 9(3), 597-603.</p> <p>Lindsay, D. S., Hagen, L., Read, J. D., Wade, K. A., & Garry, M. (2004). True photographs and false memories. <i>Psychological Science</i>, 15(3), 149-154.</p> <p>Reaction Paper #3 Due</p>
Thursday	29-Sep		Presentations (Group 2)

Tuesday	4-Oct	On-line Scene Representations	<p>Simons, D. J., & Levin, D. T. (1997). Change blindness. <i>Trends in cognitive sciences</i>, 1(7), 261-267.</p> <p>Rensink, R. A., O'Regan, J. K., & Clark, J. J. (1997). To see or not to see: The need for attention to perceive changes in scenes. <i>Psychological science</i>, 8(5), 368-373.</p> <p>Reaction Paper #4 Due</p>
Thursday	6-Oct		Presentations (Group 3)
Tuesday	11-Oct	At the Movies	<p>Smith, T. J., Levin, D., & Cutting, J. E. (2012). A Window on Reality: Perceiving Edited Moving Images. <i>Current Directions in Psychological Science</i>, 21(2), 107-113.</p> <p>Smith T J, Lamont P, Henderson J M. (2013). Change blindness in a dynamic scene due to endogenous override of exogenous attentional cues. <i>Perception</i>, 42(8) 884 – 886.</p> <p>Reaction Paper #5 Due</p>
Thursday	13-Oct		Presentations (Group 4)
Tuesday	18-Oct	Eye Movements in Real-world Scenes	<p>Henderson, J. M. (2003). Human gaze control during real-world scene perception. <i>Trends in cognitive sciences</i>, 7(11), 498-504.</p> <p>Tatler, B. W., Hayhoe, M. M., Land, M. F., & Ballard, D. H. (2011). Eye guidance in natural vision: Reinterpreting salience. <i>Journal of Vision</i>, 11(5), 5.</p> <p>Reaction Paper #6 Due</p>
Thursday	20-Oct		Presentations (Group 5)

Tuesday	25-Oct	Marketing and Ads	<p>Higgins E, Leinenger M and Rayner K (2014) Eye movements when viewing advertisements. <i>Front. Psychol.</i> 5:210. doi: 10.3389/fpsyg.2014.00210</p> <p>Pieters R. & Wedel, M. (2007). Goal Control of Attention to Advertising: The Yabus Implication. <i>Journal of Consumer Research</i>, 34, 224-233.</p> <p>Reaction Paper #7 Due</p>
Thursday	27-Oct		Presentations (Group 1)
Tuesday	1-Nov	Searching Through Scenes	<p>Malcolm, G. L., & Henderson, J. M. (2010). Combining top-down processes to guide eye movements during real-world scene search. <i>Journal of Vision</i>, 10(2), 4.</p> <p>Wolfe, J. M., Võ, M. L. H., Evans, K. K., & Greene, M. R. (2011). Visual search in scenes involves selective and nonselective pathways. <i>Trends in cognitive sciences</i>, 15(2), 77-84.</p> <p>Reaction Paper #8 Due</p>
Thursday	3-Nov		Presentations (Group 2)
Tuesday	8-Nov	Radiology and Search	<p>Drew, T., Evans, K., Võ, M. L. H., Jacobson, F. L., & Wolfe, J. M. (2013). Informatics in radiology: what can you see in a single glance and how might this guide visual search in medical images? <i>Radiographics</i>, 33(1), 263-274.</p> <p>Drew, T., Cunningham, C., & Wolfe, J. M. (2012). When and why might a computer-aided detection (CAD) system interfere with visual search? An eye-tracking study. <i>Academic radiology</i>, 19(10), 1260-1267.</p> <p>Reaction Paper #9 Due</p>
Thursday	10-Nov		<p>Presentations (Group 3)</p> <p>Friday November 11 – Research Proposal Description Due</p>

Tuesday	15-Nov	Research Paper Writing Session	In-class Writing Tutorial Research Paper Outline Feedback
Thursday	17-Nov	***No Class***	
Tuesday	22-Nov	Navigation and Spatial Perception	Zhao, M., & Warren, W. H. (2015). How You Get There From Here Interaction of Visual Landmarks and Path Integration in Human Navigation. <i>Psychological science</i> , 26, 915-924. Astur, R. S., Purton, A. J., Zaniewski, M. J., Cimadevilla, J., & Markus, E. J. (2016). Human sex differences in solving a virtual navigation problem. <i>Behavioural brain research</i> , 308, 236-243. Reaction Paper #10 Due
Thursday	24-Nov		Presentations (Group 4)
Tuesday	29-Nov	Driving	Sanbonmatsu, D. M., Strayer, D. L., Biondi, F., Behrends, A. A., & Moore, S. M. (2016). Cell-phone use diminishes self-awareness of impaired driving. <i>Psychonomic bulletin & review</i> , 23(2), 617-623. Watson, J. M., Memmott, M. G., Moffitt, C. C., Coleman, J., Turrill, J., Fernández, Á., & Strayer, D. L. (2016). On Working Memory and a Productivity Illusion in Distracted Driving. <i>Journal of Applied Research in Memory and Cognition</i> . Reaction Paper #11 Due
Thursday	1-Dec		Presentations (Group 5)