

**Psychology 335: Gambling and Decision Making**  
*University of British Columbia, Vancouver*

*Instructor:*

The primary Instructor for this course is Dr. Luke Clark, Director of the Centre for Gambling Research at UBC, in the Department of Psychology. For office hours, Luke will be available for discussion with students after each class, and on Mondays at 2pm in his office (CIRS building on West Mall, 4<sup>th</sup> floor, room 4243B). Email [luke.clark@psych.ubc.ca](mailto:luke.clark@psych.ubc.ca).

We are fortunate to have 2 further guest lecturers this term: Dr Gerald Thomas is the Director for Alcohol and Gambling Policy at the BC Ministry of Health, and he will contribute 3 lectures on gambling policy, and Dr Terri-Lynn MacKay is a sessional instructor in the Department of Psychology, who has researched clinical aspects of gambling behaviour.

*Teaching Assistant:*

The TA for this course is Stephanie Chu (email [swmchu@psych.ubc.ca](mailto:swmchu@psych.ubc.ca)); Steph is an MA2 student in the Centre for Gambling Research, working on physiological arousal in gambling and the addictive features of modern slot machines. Steph's office hours will be Fridays 3-4pm in room 3508 (Kenny Building).

You may contact the TA or the Instructor in person or by email. Please be judicious in your use of email: if you have more than 2 questions, your best option is to visit in person, in office hours.

*Timetable:*

Lectures are on Mondays, Wednesdays, Fridays at 12 noon in Buchanan A.

*Course description*

This course will study gambling behaviour as a lens for examining the psychology of decision-making and the brain mechanisms that support risky choice. Gambling is a ubiquitous form of entertainment that becomes dysfunctional for a minority. In British Columbia, 73% of the population report past-year gambling, and BC receives 2.7% of its total provincial revenue from gambling, which is higher than that for alcohol and tobacco combined. Around 1% of the population warrant a diagnosis of 'pathological gambling', with some evidence of gambling harms in 4-5% of the population; this subset accounts for at least a quarter of all gambling revenue in the province.

Two questions dominate the course. First, what does the existence and popularity of gambling tell us about human decision-making? Second, how does gambling become pathological for some people, and how should society respond to these harms? This multi-disciplinary course will integrate complementary approaches from cognitive and clinical psychology with relevant work from neuroscience and economics.

*Learning Objectives*

By the end of this course, students will be able to:

- 1) demonstrate knowledge of concepts from the fields of decision-making, neuropsychology and addiction research that are relevant to understanding the psychology of gambling behaviour.

- 2) explain the assessment of gambling involvement and the clinical diagnosis of problem gambling, as well as contemporary theories of problem gambling within an addictions framework.
- 3) consider the application of psychological research on gambling to informing public policy and government regulation of gambling ('responsible gambling').
- 4) evaluate primary literature in gambling research, including the design, key methods and statistical interpretation, as well as considering strengths and limitations of the extant research
- 5) critically consider the media portrayal and public awareness of gambling, with attention to newspaper coverage of gambling research, gambling advertising, and gambling in the movies.
- 6) synthesize findings across disparate fields of research, in order to appreciate the interdisciplinary nature of gambling research.

*Prerequisites:*

Either (a) PSYC 100 or (b) all of PSYC 101, PSYC 102.

*Evaluation*

- Midterm exam                      35%                      (assessing LO 1, 2, 4)
- Written assignment                15%                      (assessing LO 4, 5)
- Final exam                            50%                      (assessing LO 1 – 6)

Exams can cover material from both the lectures and assigned readings. The midterm will consist of multiple choice and short-answer questions. The final exam is cumulative, but with an emphasis on the second half of the course. The final exam will involve short answers (30 minutes) and an essay (30 minutes), in which marking will emphasize critical thinking and synthesis of concepts across the course.

*Written assignment*

Students will prepare a report (maximum length 10 pages; 12 point Times New Roman, double spaced, 1 inch margins) on a newspaper article that describes a research paper on gambling. Newspaper articles should not have been published prior to 2010, must mention 'gambling' or 'gamblers' in the title of the article, and are recommended to be from New York Times, BBC, CBC, Vancouver Sun, Globe and Mail, or The Guardian. **The article should refer directly to a scientific paper that is searchable on PubMed or PsycINFO, and the student must locate, read and submit the original research article.** Copies of the newspaper article and journal paper should be submitted for approval the week prior to the report deadline. The report should describe the objectives and findings of the journal paper, including limitations and weaknesses, the implications of the research for either problem gambling treatment or public policy, and consider the accuracy of the media coverage (Does new article 'dumb down' the findings? Does the journalist show evidence of an 'agenda'? How might reporting influence public understanding of gambling, for better or worse?). Strong marks will be awarded for an accurate and concise description of the research, and the student's evaluation of the media portrayal of the research – the quality of the research article itself is not under scrutiny.

Some examples of appropriate newspaper articles:

<http://www.theguardian.com/education/2010/sep/27/gambling-brain-dysfunction-improbable-research>

referring to Shiv et al (2010) Investment Behavior and the Negative Side of Emotion. *Psychological Science*:

[http://www.washingtonpost.com/national/health-science/sounds-of-slot-machines-can-manipulate-players-researchers-say/2013/07/06/bfbd34ec-e3f8-11e2-80eb-3145e2994a55\\_story.html](http://www.washingtonpost.com/national/health-science/sounds-of-slot-machines-can-manipulate-players-researchers-say/2013/07/06/bfbd34ec-e3f8-11e2-80eb-3145e2994a55_story.html)

referring to Dixon et al (2013). The Impact of Sound in Modern Multiline Video Slot Machine Play. *Journal of Gambling Studies*; 10.1007/s10899-013-9391-8

<http://www.washingtonpost.com/news/innovations/wp/2014/12/31/when-internet-addiction-is-actually-a-good-thing/>

referring to Cheng & Li (2014) Internet Addiction Prevalence and Quality of (Real) Life: A Meta-Analysis of 31 Nations Across Seven World Regions. *Cyberpsychology, Behavior, and Social Networking* 17: 755-760. doi:10.1089/cyber.2014.0317.

And one that would be not appropriate (as there is no searchable publication linked to the story):

<http://www.theguardian.com/society/2014/feb/28/englands-poorest-spend-gambling-machines>

Deadlines: The written assignment is scheduled after the midterm exam (see dates in the Lecture and Reading Schedule). One lecture will give an overview of the objectives and requirements of the written assignment. Students must submit their chosen research article and newspaper article for approval to the instructor by Nov 4. (Students will be informed of any unapproved articles by Nov 6). The written assignment is due on Nov 13.

Marking: The written assignment will be given a mark out of 20, with marks allocated for the following:

- accurately and concisely describing the objectives of the original research article (4 points)
- accurately and concisely describing the design of the original research article, with awareness of limitations (4 points)
- accurately and concisely describing the findings of the original research article (4 points)
- consideration of how the research informs either treatment or public policy (4 points)
- discussion of the accuracy and objectivity of the media coverage (4 points).

### Course grading

In order to reduce grade inflation and maintain equity across multiple course sections, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, **the mean grade in a 300-level class is 70 for a good class, 68 for an average class, and 66 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 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, your course percentage is converted according to the key below:

<b>A+</b>	90-100%	<b>B+</b>	76-79%	<b>C+</b>	64-67%	<b>D</b>	50-54%
<b>A</b>	85-89%	<b>B</b>	72-75%	<b>C</b>	60-63%	<b>F</b>	0-49%

**A-** 80-84%      **B-** 68-71%      **C-** 55-59%

Remember, you are earning a degree at a highly reputable post-secondary institution. Therefore, criteria for success are high. The Faculty of Arts offers the following guidelines that broadly characterize the kind of work that is generally associated with the main grade ranges. These characteristics help to put the Psychology Department Grading Policies into context. Please note that adequate performance is in the C range, which is the typical class average.

**A RANGE: Exceptional Performance.** Strong evidence of original thinking; good organization in written work; capacity to analyze (i.e., break ideas down) and to synthesize (i.e., bring different ideas together in a coherent way); superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.

**B RANGE: Competent Performance.** Evidence of grasp of subject matter; some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.

**D-C RANGE: Adequate Performance.** Understanding of the subject matter; ability to develop solutions to simple problems in the material; acceptable but uninspired work; not seriously faulty but lacking style and vigor.

**F RANGE: Inadequate Performance.** Little or no evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

#### *Course Policies*

Please mute your cell phones during class. Laptops are permitted but use of social media etc during class is obviously discouraged.

#### *Academic Misconduct*

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. Relevant to this course, the Department has implemented software that can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. Second, the Department subscribes to TurnItIn, a service designed to detect plagiarism. If a student has any questions as to whether or not their work is even a borderline case of plagiarism or academic misconduct, they are advised to consult the instructor.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

#### *Required readings*

There is no textbook for this course. Instead, students will be reading original research articles. An early lecture will prepare students for reading and appraising these articles. The assigned readings are as follows:

- A Plan for Public Health and Gambling in British Columbia*. (2015). Victoria, BC.  
<https://www.gaming.gov.bc.ca/reports/docs/plan-rg-public-health-and-gambling-2015.pdf>
- Binde, P. (2005). Gambling Across Cultures: Mapping Worldwide Occurrence and Learning from Ethnographic Comparison. *International Gambling Studies*, 5(1), 1–27.  
doi:10.1080/14459790500097913
- Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction*, 97(5), 487–499. doi:10.1046/j.1360-0443.2002.00015.x
- Clark, L., Lawrence, A. J., Astley-Jones, F., & Gray, N. (2009). Gambling near-misses enhance motivation to gamble and recruit win-related brain circuitry. *Neuron*, 61(3), 481–490.  
doi:10.1016/j.neuron.2008.12.031
- Dixon, M. J., Graydon, C., Harrigan, K. A., Wojtowicz, L., Siu, V., & Fugelsang, J. a. (2014). The allure of multi-line games in modern slot machines. *Addiction*, 109, 1920–8. doi:10.1111/add.12675
- Ellery, M., & Stewart, S. H. (2014). Alcohol affects video lottery terminal (VLT) gambling behaviors and cognitions differently. *Psychology of Addictive Behaviors*, 28(1), 206–16. doi:10.1037/a0035235
- Fortune, E. E., & Goodie, A. S. (2012). Cognitive distortions as a component and treatment focus of pathological gambling: A review. *Psychology of Addictive Behaviors*, 26, 298–310.  
doi:10.1037/a0026422
- Goldstein, R. Z., & Volkow, N. D. (2002). Drug addiction and its underlying neurobiological basis: neuroimaging evidence for the involvement of the frontal cortex. *American Journal of Psychiatry*, 159(10), 1642–52.
- Hodgins, D. C., Stea, J. N., & Grant, J. E. (2011). Gambling disorders. *Lancet*, 378, 1874–1884.  
doi:10.1016/S0140-6736(10)62185-X
- Ladouceur, R., Goulet, A., & Vitaro, F. (2013). Prevention programmes for youth gambling: a review of the empirical evidence. *International Gambling Studies*, 13(2), 141–159.  
doi:10.1080/14459795.2012.740496
- Ladouceur, R., & Walker, M. (1996). A cognitive perspective on gambling. In *Trends in Cognitive and Behavioural Therapies*.
- Lilienfeld, S., & Lynn, S. (2015). Clinical Decision Making. In R. L. Cautin & S. O. Lilienfeld (Eds.), *The Encyclopedia of Clinical Psychology* (pp. 1–13). Wiley & Sons.  
doi:10.1002/9781118625392.wbecp563

*Lower the Stakes: A Public Health Approach to Gambling in British Columbia (Provincial Health Officer's 2009 Annual Report)*. (2013). Victoria, BC.  
[http://www.academia.edu/5697812/Lower\\_the\\_stakes\\_A\\_public\\_health\\_approach\\_to\\_gambling\\_in\\_BC](http://www.academia.edu/5697812/Lower_the_stakes_A_public_health_approach_to_gambling_in_BC)

Phelps, E. A., Lempert, K. M., & Sokol-Hessner, P. (2014). Emotion and Decision Making: Multiple Modulatory Neural Circuits. *Annual review of neuroscience*, 263–290. doi:10.1146/annurev-neuro-071013-014119

Reber, A. S. (2012). The EVF Model: A Novel Framework for Understanding Gambling and, by Extension, Poker. *Gaming Research and Review Journal*, 16(1), 59–76.

Studer, B., Limbrick-Oldfield, E. H., & Clark, L. (2015). “Put Your Money Where Your Mouth Is!”: Effects of Streaks on Confidence and Betting in a Binary Choice Task. *Journal of Behavioral Decision Making*, 28, 239–249. doi:10.1002/bdm.1844

Lecture and Reading Schedule

Lecture	Date	Day	Topic	Readings
1	9 Sep	W	Orientation; tackling the assigned readings (LC)	
2	11 Sep	F	Gambling: definitions and history (LC)	(Reber 2012)
3	14 Sep	M		(Binde 2005)
4	16 Sep	W	Foundations 1: Decision Making (LC)	
5	18 Sep	F	Gambling Policy in Canada and BC (GT)	(Lower the Stakes, pg 1-18, 71-73)
6	21 Sep	M	Foundations 1: Decision Making cont. (LC)	(Lilienfeld and Lynn 2015)
7	23 Sep	W		
8	25 Sep	F	Foundations 2: Neuropsychology (LC)	(Phelps et al. 2014)
9	28 Sep	M		
10	30 Sep	W		
11	2 Oct	F	Foundations 3: Addiction (LC)	(Goldstein and Volkow 2002)
12	5 Oct	M		
13	7 Oct	W	Clinical Aspects of Addiction (T-LM)	
14	9 Oct	F	Problem Gambling: Diagnosis, Epidemiology, Assessment	(Hodgins et al. 2011)
15	12 Oct	M	<b>NO CLASS - THANKSGIVING</b>	
16	14 Oct	W	Problem Gambling, cont.	
17	16 Oct	F		
18	19 Oct	M	Revision Class	
19	21 Oct	W	<b>MIDTERM</b>	
20	23 Oct	F	<b>No Class (Cognitive Retreat)</b>	
21	26 Oct	M	Theories of Problem Gambling	(Blaszczynski and Nower 2002)
22	28 Oct	W	Arousal and Conditioning	
23	30 Oct	F	Cognitive Distortions <b>(info on written assignment)</b>	(Ladouceur and Walker 1996)
24	2 Nov	M	Illusion of Control	(Studer et al. 2015)
25	4 Nov	W	Gambler's Fallacy <b>(submit newspaper article)</b>	
26	6 Nov	F	Near-Misses	(Clark et al. 2009)
27	9 Nov	M	Theories: Gambling Types & Motives	
28	11 Nov	W	<b>NO CLASS – REMEMBRANCE DAY</b>	
29	13 Nov	F	Treatment and Prevention of Problem Gambling (LC) <b>(submit written assignment)</b>	(Fortune and Goodie 2012)
30	16 Nov	M	Clinical Aspects (T-LM)	(Ladouceur et al. 2013)
31	18 Nov	W		
32	20 Nov	F	Policy and Programmatic Responses to PG in BC (GT)	(Lower the Stakes, pg 19-25, 53-64)
33	23 Nov	M	Rage against the machines (LC)	(Dixon et al. 2014)
34	25 Nov	W		
35	27 Nov	F	Cigarettes and alcohol (LC)	(Ellery and Stewart 2014)

36	30 Nov	M	Gambling Policy in BC: Current Status (GT)	(Lower the Stakes pg 65-68; A Plan for Public Health and Gambling in BC (2015))
37	2 Dec	W	Gambling and the media (LC)	
38	4 Dec	F	Conclusions; Revision Class	
	TBA		FINAL EXAMINATION	

LC = Dr Luke Clark, GT = Dr Gerald Thomas, T-LM = Dr Terri-Lynn MacKay

