Psychology 3390: Thinking
University of Manitoba, Department of Psychology
Fall Term, 2015/2016 Academic Year

Instructor

Randall K. Jamieson, Ph.D.
Phone: (204) 474-7837
Email: randy.jamieson@umanitoba.ca
Office: P515 Duff Roblin Building
Office hour: Tuesday, 10:30 – 11:30 am

Course description

The course covers data and theory on the nature of thinking and knowing. We will examine normative (e.g., logic, probability, utility), descriptive (e.g., prospect theory), ecological (e.g., heuristics and biases), and physiological (e.g., connectionism) models of thinking and decision. We will also examine work on embodied cognition and mental representation of both language (e.g., latent semantic analysis) and number. The course concludes with a discussion of the cognitive unconscious and recent controversies surrounding statistical reasoning.

Textbook

We will read papers and book chapters. The papers can be downloaded from PsycInfo. Book chapters will be placed on 2-hour reserve at the Dafoe library. Instructions for the libraries bookmarklet can be found here: http://umanitoba.ca/libraries/tools/proxy_bookmarklet.html

Software

We will practice some computing using R (http://www.r-project.org/) and RStudio (http://www.rstudio.com/). Both are free and can be installed on a Mac, Linux, or Windows machine.

Evaluation scheme

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>10%</td>
<td>Probability and basic programming</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>10%</td>
<td>A computational analysis of heuristic decision</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>10%</td>
<td>Artificial neural networks and logic</td>
</tr>
<tr>
<td>Assignment 4</td>
<td>10%</td>
<td>Semantic space models and representation of number</td>
</tr>
<tr>
<td>Test 1</td>
<td>20%</td>
<td>October 8</td>
</tr>
<tr>
<td>Test 2</td>
<td>20%</td>
<td>November 5</td>
</tr>
<tr>
<td>Test 3</td>
<td>20%</td>
<td>December 8</td>
</tr>
</tbody>
</table>

*** Tests are essay format
Assignments

You will answer problem sets. Your answers must be typed and present a coherent written explanation of the problem and your solution. Most questions will involve some computer programming and you should include relevant graphs and outcomes from your simulations. You should include an appendix with commented and executable code written to answer the questions. Your code and written answers should be concise, explanatory, and correct. You will be marked on those three criteria. Each assignment is worth 10% of your final grade. The course instructor will teach basic programming skills in class needed to complete the assignments.

Class notes

You are responsible for your own lecture notes

Grading scheme

\[
\begin{array}{cccc}
0 \leq F < 50 & 60 \leq C < 65 & 70 \leq B < 75 & 80 \leq A < 90 \\
50 \leq D < 60 & 65 \leq C+ < 70 & 75 \leq B+ < 80 & 90 \leq A+ \leq 100
\end{array}
\]

Late policy

Missed tests and exams as well as late assignments will receive a grade of zero. Exceptions can be made if you (a) provide a valid reason for your absence (e.g., seriously ill); (b) provide documentation to support your reason (e.g., a doctor’s note indicating that you could not have written the exam at the scheduled date and time), and; (c) contact the course instructor within 24 hours of the exam time to make alternate arrangements (make-up exams will normally fall within one or two days of the original date and they will differ from the one given in class). If you know you will be unable to attend an examination or hand in an assignment on time, you should contact me at least two weeks ahead of the relevant date to discuss the possibility of making alternate arrangements.

Policy on Academic Integrity

Plagiarism or any form of cheating is subject to serious academic penalty. It is the responsibility of the student to acquaint themselves with Section 7 from the University of Manitoba Undergraduate Calendar for the current academic year – see Policies on Plagiarism and Cheating, and Examination: Personations. Academic dishonesty can result in serious consequences, e.g., a grade of zero on an assignment or exam, an F on a transcript (with a notation “CW” indicating compulsory withdrawal). The penalty can also include suspension for a period of up to five years from registration in courses taught in a particular department in Arts or from all courses taught in this Faculty. The Faculty reserves the right to check any work suspected of plagiarism through electronic resources. Speak to your instructor if you have any questions.

There are three forms of academic dishonesty: (1) Plagiarism is to take the words or ideas (found on paper or electronic format) of another person and pass them off as one’s own.
Submission of a paper written in part or in whole by someone other than you is considered to be plagiarism and/or cheating. (2) Cheating in examinations or exams can take a variety of forms including, but not limited to, the use of unauthorized materials, and copying material from others. An assignment that is prepared for one course cannot be submitted for another course; this is called duplicate submission and is a form of cheating. (3) Examination Personation – A student who arranges for another individual (student or non-student) to write any nature of examination, as well as the individual who writes the exam, will be subject to discipline under the University of Manitoba’s Student Discipline Bylaw.

Prerequisite

A grade of C or better in PSYC 1200 or 17.120 (or 17.121 and 17.122 or PSYC 1211 and PSYC 1221 from St. Boniface) as well as completion of PSYC 2480 (Cognitive Processes) is required as a prerequisite for this course. If you do not have this grade in PSYC 1200 and/or you have not completed PSYC 2480 and/or you have not obtained special permission to take this course, the Registrar and the Department require that you voluntarily remove yourself from this course immediately.

Reading Schedule


