



**Methods and Statistics (Psychology 2030 N)**  
**Summer Session I (2017)**  
**Tuesdays & Thursdays, 6:00pm to 8:50pm in L1060**

**Instructor:** Scott Semenyina

**Email:** [scott.semenyna@uleth.ca](mailto:scott.semenyna@uleth.ca) (the best way to contact me)

**Office:** D853 (University Hall) or PB230G (Penny Building, Downtown)

**Office Hours:** No formal office hours are scheduled (unless student discussion throughout the semester reveals this to be necessary). Rather, I may be contacted via email ([scott.semenyna@uleth.ca](mailto:scott.semenyna@uleth.ca)), and appointments can be made that fit with both student and instructor schedules.

**Course Prerequisites:** Psychology 1000 (or a substantially similar course), or Sociology 2130

**Course Content and Objectives:**

Psychology 2030 will serve as an introduction to the most common scientific methods employed in psychology (and some related disciplines), as well as the statistical approaches used alongside these methodologies. The largest emphasis will be placed on thinking critically and flexibly about methodology, and the ways that statistics inform our understanding of results derived from various methodological approaches. The ultimate aim of this class is for students to knowingly and critically read a scientific paper, with an understanding of why researchers need a theoretical rationale for their work, what a scientific hypothesis is, ways it can be tested, what statistical results mean, and why these results lead (rightly or wrongly) to certain interpretations and conclusions. Lectures and discussion will focus on the scientific process of research in psychology, and why it is important. Examples will be drawn from a range of topics—the efficacy of bicycle helmet legislation, the value of alternative medicines, common medical screening tests, the usefulness of antidepressants for treating depression, reporting of scientific findings in popular media, and the existence (and possible causes) of sex differences in personality and behaviour. Many discussions will challenge the beliefs of students, or present two opposing views of a research question. This is on purpose. Only an accurate understanding of the scientific method, as well as research methodology and statistics, can inform a worldview that is evidence based and leads to clear thinking about many "facts" we encounter in both research and everyday life.

**Required Textbook**

The course textbook puts emphasis on the use of statistical techniques actually used in experimental and research psychology, rather than on an introduction to statistics as a mathematical discipline. All of the materials for this aspect of the course, and some others (e.g., writing in APA style), have been collected into a book by John R. Vokey and Scott W. Allen, entitled *Thinking With Data* (7<sup>th</sup> Edition). This book is available at the cost of printing and distribution from the bookstore (in a nicely-bound, double-sided format). The latest, hyper-linked, digital version of the book is always freely available in portable document format (PDF) on the web at: <http://people.uleth.ca/~vokey/pdf/thinking.pdf>. Other course readings and important information will be posted on the PSYC 2030N Moodle Page.

## Evaluation (Midterms and Final Exam)

Evaluation will consist of three take-home exams, each worth 1/3 of your final grade, and made available via the web and e-mail. The first midterm will be made available **Thursday, May 18<sup>th</sup>**, 2017 to be submitted no later than the following class (**Tuesday, May 23<sup>rd</sup>**). Midterm two will be made available on **Thursday, June 1<sup>st</sup>**, 2017 to be submitted the following class, (**Tuesday, June 6<sup>th</sup>**). The **Final Exam** will be made available on **Thursday, June 15<sup>th</sup>**, 2017, and is due no later than 6:00pm on **Tuesday June 20<sup>th</sup>**. Exams are cumulative in the sense that all education is cumulative—more complex questions are built upon a simpler foundation. Each exam will primarily focus on the material covered in the 4 most recent class periods leading up to the exam. That said, exam questions will often require an understanding of previous material detailed in the course.

Each take-home exam will consist of ten, short-answer questions, of which you choose six to answer. The values shown in the conversion Table below will be used as a guideline to course grades out of 100% to minimum letter-grades, although the instructor reserves the right to adjust individual grades upward to reflect such aspects of performance as a marked improvement over the semester.

Percentage	Grade	Percentage	Grade
93.1–100	A+	69.1–73.0	C+
89.1–93.0	A	65.1–73.0	C
85.1–89.0	A–	61.1–65.0	C–
81.1–85.0	B+	57.1–61.0	D+
77.1–81.0	B	50.0–57.0	D
73.1–77.0	B–	<50.0	F

Please keep in mind that **I will not answers questions such as “will this be on the final exam?”** (i.e., I will simply ignore those emails). If I have discussed something in class, it is fair game. I will not ask questions that cannot be answered based on lecture material (although reading the textbook will certainly help cement what is discussed in class) or videos shown in class. There will be no questions pertaining to mathematical proofs detailed in the textbook.

The work you submit for your take-home exams must be your own. You are encouraged to work in groups on your exams, but everyone must hand in their own work that does not simply mirror that of someone else. It is an academic offence to submit someone else’s work as your own. Please see section 4 of Academic Offences, Student Discipline Policy—academic offences (p. 75 of the 2016/2017 academic year calendar) for details.

## Missed Exams

Given the structure of the exams (outlined above), **no extensions or makeup exams will be given**. If a *valid* medical or personal emergency prevents a student from completing the exam in the allotted time, this will be evaluated on a case-by-case basis by the instructor, and adequate documentation of the situation must be provided.

## Research Participation

Because this course is a Methods and Statistics class, it is important that students be given the opportunity to experience first-hand what it is like to participate in psychology research. This experience can help solidify in-class discussions of methodology and research. Each research project typically takes less than 1 hour of your time, and you will receive an additional 1–2% credit (depending on the study) to add to your final grade. Students can earn a maximum of 3% in additional participation credit (i.e., a student can theoretically score 103% in the course, although this will only result in an A+). Please note that there is no guarantee that all students (or even any) will be able to achieve the maximum extra credit, as participation depends upon available studies (which are far beyond my control). These extra credits are added after all grade cutoffs have been established for course work, such that students who choose not to participate are not disadvantaged.

**Directions for Participation:** You will receive an email to your U of L account with your Login name and password. Please go to <http://psychleth.sona-systems.com> and sign in as soon as you receive notification to do so. Studies will then become available on May 8, 2017. There will be NO transfer of credits between courses. If you are registered in another course that offers credits, a second email will be sent to you with a different email and password. Sign up in the course to which you want your credits to be assigned. Further studies and timeslots will be added throughout the semester, please keep checking, but remember that participation is on a first-come basis. Questions regarding research participation should be directed to Leanne at [wehlage@uleth.ca](mailto:wehlage@uleth.ca). The last date to participate in studies is June 19, 2017.

## Questions and Discussion

Ideally, all questions and discussion of course material should occur during class time so everyone can benefit from them. It is my hope that the material in this course challenges beliefs, causes students (and the instructor!) to question their opinions and the evidence on which they are based on, and ultimately encourages an evidence-based world view. Many topics will touch on controversial issues in both psychology and the broader scientific community. Open discussion and diverging viewpoints are encouraged and welcomed. Abusive language, name calling, and ad-hominem attacks (one of many logical fallacies that will be discussed in class) are not.

**Academic accommodations:** If you have a *documented* condition that prevents you from fully participating in this course, including evaluation procedures, it is your responsibility to contact your Instructor regarding your individual situation. Please note that no accommodations will be given without official notification from the Accommodated Learning Centre (<http://www.uleth.ca/ross/accommodated-learning-centre/>). If you require accommodations, you must discuss this need with your instructor no more than 7 days after the start of the course.

**Lecture Notes:** Lecture notes covered in class **will not be made available to students**. Come to class. Take notes (ideally by hand, as we will discuss in the first lecture). If you are unable to attend class, or must miss a portion of a class, please obtain class notes from one of your classmates.

**Disclaimer:** The information in this Course Outline is subject to change; any changes will be announced in class.