AK/PSYC 3010A 3.00 Intermediate Research Methods

Summer 2017
Term: S1
Mon. and Wed. 2 – 5 pm
Ed Haltrecht

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Secretary: Terri Cawley BSB101

Crosslistings:

AS/PSYC 3010 3.00, SC/PSYC 3010 3.00, HH/PSYC 3010 3.00

Course Description:

An intermediate course to provide further experience with the design, execution, analysis, interpretation and communication of psychological studies. Building on the foundation established in AK/AS/SC/PSYC 2030 3.00, the course further prepares students for many types of advanced-research and Honours thesis projects.

No Text Required.

Prerequisites: AK/AS/SC/PSYC 1010 6.00 or AK/PSYC 2410 6.00, with a minimum grade of C; AK/AS/SC/PSYC 2030 3.00 or AK/PSYC 2530 3.00; one of AK/AS/SC/PSYC 2020 6.00, AK/AS/SC/PSYC 2021 3.00, AK/PSYC 2510 3.00. Degree credit exclusions: AK/PSYC 3180 3.00. Note: Not open to students who have passed or are taking AK/AS/SC/PSYC 4000 6.00, AS/SC/PSYC 4170 6.00, AK/PSYC 4700 3.00, or AK/PSYC 4800 6.00.

Evaluation:

1. Research Proposals (PowerPoint presentation)	May 24	20% *
2. Written paper covering Proposal elements (Introduction & Methods)	May 31	20% *
3. Posters	June 5	30% *
4. Research Paper (Results & Discussion)	June 17	30% **

(* common group mark; ** individual mark)

Lecture Schedule
Note: Last date to add a course without permission of instructor is May 5
Last date to add a course with permission of instructor is May 12
Last date to drop course without receiving a grade is June 2

PROGRAM LEARNING OUTCOMES
Apply knowledge of research methods in designing a research project
- Locate and summarize relevant empirical knowledge
- Communicate knowledge of research methods orally and in written form

TOPICS COVERED
Generating Research Ideas
- Conducting a Literature Search
- Summarizing the Scientific Literature
- Designing a study to address a research idea
- Finding and Selecting Measures
- Writing in APA Format
- Oral Communication of Methods Knowledge

May 1	**Introduction** Forming groups of 3 – 5 students – Selecting research areas
May 3	**Selecting research areas**
May 8	**Selecting research areas**
May 10	**Hypotheses & Research Design**
May 15	**Selecting research areas - working in teams**
May 17	**Analysis using SPSS** Meeting in the HEBB lab BSB 159
May 24	**Proposal Presentations** Meeting in the regular classroom
May 29	**Creating data set & SPSS data analyses** Meeting in the HEBB lab BSB 159
May 31	**SPSS data analyses** Meeting in the HEBB lab BSB 159
June 5	**Poster Presentations** Meeting in the HEBB lab BSB 159
June 7	**Finalizing papers** Meeting in the HEBB lab BSB 159
June 12	**Final paper issues** Meeting in the HEBB lab BSB 159

Please check the Hebb Lab website (www.yorku.ca/hebblab)
Moodle will be used in the course.

Additional Information regarding your assignments- both group and individual

1. The class will form into groups of 3 – 5 students based on areas of common interest- selected by students.
2. **Research Proposals (PowerPoint Presentation)** – to be discussed in class with supportive material 20%
3. **Written paper covering Proposal Elements (Introduction, Methods, References) - GROUP SUBMISSION – 20%**

   a. Include:
      i. Title Page + the name of the authors
      ii. Introduction - Includes background literature and your hypothesis
      iii. Methods - Describes the experimental methods you used (your surveys, demographic info, procedures etc)
      iv. Appendix (if needed – may contains items such as stimuli used in the experiment, unique tests, etc)
      v. Bibliography
   b. In the Introduction describe the general area of interest, summarize the relevant literature and describe the question/hypothesis you are going to address. Here is where you also define the terminology related to your question. It is important to refer to the related theories and main articles on your topics in order to provide enough background and a good rationale for your study and hypothesis in introduction.
   c. In the Methods you put all the details of your experimental methods - the surveys you used (if you made your own, provide the survey in the Appendix), the demographic information of your subjects (how many, gender, age etc), experimental procedures (how the subjects were selected, where/how the surveys were administered etc.), materials (if you conducted an actual experiment). If you're in doubt whether some information is relevant, it is better to put it in. Other researchers should be able to replicate your study using only the information in your paper. If you have used props or tools, you can provide images/diagrams of these items in this section.
   d. Longer papers are not better papers. Good papers are the succinct ones that cover everything that needs to be covered without being redundant.
   e. It is also necessary to give references about the scales/measures used in your method section. When all this is done well enough, there should already be enough citations.
   f. The Introduction and Methods sections will normally be about 6-10 pages long.
   g. Normally there will be about 10+ references. The Bibliography is the list of all the articles you cite in your paper. Use APA citation format. You can use this resource for your reference: http://owl.english.purdue.edu/owl/resource/560/02/ (look at the menu on the left hand side of the website for relevant information).

4. **SPSS** – we will learn how to perform statistical analyses using SPSS
5. **Data Generation**: Because time is short for the summer session of 3010, we will not collect data, but generate data. Each team will have at least 2 hypotheses. Statistically, one hypothesis should be supported and one hypotheses should fail to be supported.

6. **Posters – 30%**
   a. Teams will present a single team poster. Sample posters will be available.
7. **Research Paper (Results, Discussion, Conclusion) INDIVIDUAL SUBMISSION – 30%**
   a. Include:
      i. Results - Statistical analysis of the data + graphs
      ii. Discussion - Interpretation and discussion of the analysis in Results, framing your findings within the larger picture and relating to previous literature
      iii. Conclusions - Brief summary of your findings
      iv. Appendix (if needed)
      v. Bibliography
   b. In the Results section you will describe the statistical analysis that you have performed on your data and summarize the results of this analysis. Do not paste in tables from SPSS. Reporting statistical findings needs to be done in APA format. If you are not familiar with how to report stats, here are some useful resources:

      http://my.ilstu.edu/~jhkahn/apastats.html
      http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWstats.html

      You can also find this information in most stats textbooks.
      You will also need to represent your data graphically. You can either use SPSS graphs or Excel or any other graphing software you're comfortable with. Make sure your axis are properly labeled and there is a legend (if necessary). Make sure you have error bars where appropriate (standard errors, deviations or confidence intervals). Having error bars helps to assess the statistical significance of your data visually. Provide a caption below each graph describing what the graph is showing.
      Draw conclusions from the statistic analysis but don't discuss your findings in detail in this section, this is what the Discussion section is for.
   c. In the Discussion section you relate your findings to previous literature and discuss them in more details. Here you can mention the limitations of your study, highlight the interesting features as well as describe possible future work.
   d. In the Conclusions section you briefly summarize your findings and emphasize the main take home message.
   e. Appendix is place to put all the relevant information that is too long to go in the body of the paper. For example, some analyses or graphs.
   f. Bibliography is the list of all the articles you cite in your paper. Use APA citation format. You can use this resource for your reference:
      http://owl.english.purdue.edu/owl/resource/560/02/ (look at the menu on the left hand side of the website for relevant information).
   g. The Results, discussion, and conclusion sections will normally be about 6-10 pages long.