

Sociology 5105 (formerly 53.515) Research Design and Data Analysis

Fall Term 2002

Classes: Wednesday 18:00 - 21:00 Room A715LA/Lab 507SA

First class: Sept. 11, 2002

Craig McKie

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Office hours will be on Wednesday afternoons from 15:00 to 17:00, or by appointment

Outline

The objective of this course is to ensure that students completing the course have at least the basic tool kit of core professional research and presentation skills. Previous instruction in this area is not absolutely required nor assumed though it would be welcomed: **this is not a mathematics course.** Students are obliged to obtain a student computer account on a university UNIX system. This access will typically be by means of a CHAT account since accounts on the research machine called Rideau are no longer available to graduate students except under exceptional circumstances. A CHAT account will allow you to use a UNIX machine called Prince. You should also obtain a personal passcode for your library card account as soon as is practically possible at the main desk in the library. The latter passcode is necessary to use certain library online resources or from a remote terminal such as a home computer, and it is also used to renew the loan of materials. Familiarity with the basic UNIX commands necessary to use the system will be acquired. It (UNIX) is necessary to use large public use datasets such as that for the Census of Canada which are too large to use on a personal computer. Students are encouraged when applying for an account to get the full set of instructive handouts on the CHAT system, Unix, SPSS on Unix, Internet utilities, Unix editors pico and emacs, and how to use electronic mail and the USENET newsgroups from the university computer consulting centre. An account on another Internet Service Provider is a definite plus for ease of dial-up access from home (limited 'free' ISP service is now available in the Ottawa area from services such as Juno and NetZero) but it will still be necessary to have a Carleton account in order to use the CANSIM facility at the University of Toronto and the computers in the Southam lab during lab sessions. Additional materials will be distributed electronically on a class listserv or mailing list when it is established, and on paper in classes.

There will be several sessions in class hours in a computer lab 507SA. The course will be run in seminar format if numbers permit and all students will be expected to make presentations from time to time as circumstances dictate. This is not a lecture course; it is an activity-based seminar with individualized programmes of study. There may be guest speakers on particular topics from time to time. If a student wishes to specialize and can demonstrate possession of the basic skills, concentration on advanced skill acquisition, such as advanced statistical analysis techniques, can be arranged. Students will be expected to share their learning experiences in the classroom context. Preparation time outside of class hours should be made allowance for. Sub-group tutorials may be arranged when mutually advantageous, for remedial work for instance. In order to get a UNIX systems account, students must go to one of the public computer labs scattered about the campus and apply for a CHAT account following the online procedure. CHAT accounts will allow you access to all the datasets held at the Data Centre in the library and SPSS and SAS to manipulate them with in the UNIX operating system of the machine called Prince. Other ways of manipulating data will be discussed in the lab sessions. Be sure to pick up the instructional materials referred to above at AB401 of the main administration building if you have to make a visit there. The CHAT account, once opened, will remain in effect throughout the student's academic career. CCS also offers short courses in Unix (various levels), and on the tools of the Internet. These courses are all desirable for the purposes of this course. They are given many times throughout the academic year.

Topics covered included will be:

Specification of research problems
Electronic literature searches and techniques
Basic tools of World Wide Web research
The location of data resources
Mobilizing data resources including vital statistics and Census data
Proposal writing
Data cleaning
Standard analytic tools (context: SPSS and SAS; Excel spreadsheets and analytic graphics)
Standard statistical analysis techniques and problems of inference
Graphics programmes and presentation skills (including Powerpoint presentations)
Presentation and writing techniques

Expectations:

It is expected that by the end of the course, students will be able to demonstrate:

1. Working familiarity with SPSS (preferably the Unix version or the Windows version) and SAS, Excel spreadsheets and analytic graphics creation.
2. Working familiarity with Internet research resources and tools.
3. Working familiarity with literature search procedures using Sociofile and Current Contents.
4. Working familiarity with the structure of official data in Canada (including the Census).
5. Working familiarity with standard statistical analysis procedures.
6. Working familiarity with report writing and presentational skills.
7. Working familiarity with the oral presentation of research findings and rhetoric.

Recommended Texts:

[These are basic reference materials which you should use if you feel the need].

1. Craig McKie. Using the Web for Social Research. Toronto: McGraw-Hill Ryerson, 1997.
2. Earl Babbie and Fred Halley, Adventures in Social Research. Sage 1994; or Earl Babbie and Fred Halley, Adventures in Social Research; Data Analysis using SPSS for Windows. Sage 1995.
3. Tim May, Social Research: Issues, methods and process, 3rd edition. Philadelphia: Open University Press 2001.
3. A free copy of a book-length basic SPSS how-to manual is downloadable as a Word document (SPSSbook.doc) from one of my web sites: <http://www.research.ca.tt> Its about 9 meg in size and runs to about 400 pages.

Requirements:

An overall grade in the course will be awarded on the basis of:

1. Completion of term assignments. There will be seven term assignments each worth 10 percent of the final grade. These will be due weekly beginning in the third week of classes. The contents of these assignments will be spelled out in the second class. In general, these assignments will form skill modules in the completion of data search, condensation, and report writing exercise (for example, using the basic summary tabulations and the Public Use Sample from the 1996 Census of Canada).
2. An oral presentation in the final class and submission of a final course paper on the same subject 10 days after the final class. The oral presentation (10%) and the final paper (20%) together will account for 30% of the final course grade.

Notices:

- If there is any student in this course who, because of a disability, may have a need for special accommodations, please come and discuss this with me. As well, students must contact the Paul Menton

Centre for Persons with Disabilities (Unicentre 500) to obtain a Letter of Accommodation for any special arrangements. Attention is also drawn to the Writing Tutorial Service (215PA), Student Life Services (501 Unicentre), and the Student Academic Success Centre (302 Tory).

- Plagiarism and duplication of assignments will be treated as instructional offences and referred to the Office of the Dean of Graduate Studies. If an offence is confirmed following an interview with the Dean, penalties may range from partial loss of grade value, to withdrawal from program, suspension of studies, or expulsion from the University.
- Students are reminded to always retain a hard copy of any work submitted in satisfying the requirements of the course (excluding formal examination papers).
- Final grades are not official until signed by the Dean who has the power to alter final grades.

Letter Grade & Percentage Equivalent

A+ 90 and above 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 less than 50

Class schedule: Fall Term 2002:

September 11,18L*,25 October 2L, 9,16L,23,30L November 6L,13,20L,27**

****Library session scheduled for Oct.2 6-8PM in ML102 with Susan Tudin/Elizabeth Knight**

*L is a scheduled lab session; it may not always be used for this purpose however. Reservations are necessary because all class lab use must be scheduled months in advance

E&OE