



SYLLABUS

Course Number: PP624

Course Title: Research Methodology/Statistics

Semester: Fall 2008

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Lecture hours/week: 2

Prerequisites/Co-requisites:

Catalogue description: This course introduces students to research principles, methodologies, instrumentation, statistics, and computer-based searches. Current published literature relevant to chiropractic are reviewed and critiqued.

Required texts:

Haneline MT. Evidence-Based Chiropractic Practice. Sudbury, MA: Jones & Bartlett 2007.

Recommended texts:

Description of evaluation methods:

Lecture

Multiple choice examinations (2)

Literature Searches (1)

Thesis/Senior Paper Proposal (1)

Literature Search

Each student will choose a subject from a list provided by the instructor to perform a MedLine computerized literature search on. There will be no duplicate subjects. Subjects will be assigned on a first come first served basis. The search terms used and the results obtained will be submitted in the regularly scheduled class session on 5rd **week of class**. No assignments will be accepted after the class, no exceptions. Anyone submitting their search early will have the opportunity to make revisions to their search suggested by the instructor and will only be graded on the search submitted on the 5rd week of class. Students are strongly urged to avail themselves of this early review of their search. A separate handout will give more details about proper submission of this assignment.

Senior Project Proposal

Each student will submit a **U.B.C.C. Senior Project Advisor Request Form** for thesis/senior project. It will be submitted during the last regularly scheduled class session. No assignments will be accepted after class on this date, no exceptions.

The proposal can be for proposed research project investigating any aspect of health care pertinent to the practice of chiropractic. It does NOT and probably should not be on a topic

related to the literature search assignment. Details on the criteria for this proposal will be handed out in class.

It should be noted that writing is discipline specific. Thus, the way one writes for scientific publication can be very different than the style and form used in other disciplines. The best way to learn this is to both attempt to emulate the writing style one has seen in peer-reviewed scientific journals and to have someone expert in that style repeatedly critique one's writing. Thus, anyone submitting their proposal early will have the opportunity to make revisions to their proposal suggested by the instructor and will only be graded on the proposal submitted during the last class. Students are **STRONGLY** urged to avail themselves of this early review of their proposal. This assignments must be submitted typed or as computer printout in 12 point Times Roman type or equivalent in black ink on white paper. The papers shall be affixed with a single staple in the top left hand corner and without a cover or binder. It will be submitted on the **U.B.C.C. Senior Project Advisor Request Form**(available as a Word template on my web site). Finally, all cited literature will be submitted with the proposal and affixed to the proposal with a single binder clip. The student's name must appear on the top of every photo copy attached to the introduction. If one is using a reference from a textbook a photo copy of the title page, chapter title page must be included. The literature will be returned to the student at the next class meeting.

This assignment **MUST** be completed with a 75 or better. If graded with less than a 70 the student **MUST** revise until the proposal receives a 75. Any student that receives less than a 75 initially will at maximum receive a 'C' for this course. Hence, students are again strongly urged to avail themselves of the early review of their proposal.

Grading procedures:

Final grade = 25% Midterm exam, 25% final exam, 25 % search assignment, 25% Senior Project Advisor Request Form

Curving

The written exams will be curved using t-score this results in a class average of 50. The raw scores on the exams will be converted to Standard T-Score. T-Scores removes bias that exists because of different levels of difficulty in different examinations, All grades are normalized to a curve with the average at 50 and one standard deviation equal to 10 points. Thus, a T-score of 50 on any assignment means performance equal to the class average. Additional scaling of T-score above the average of 50 will be done at the instructor's discretion.

The grading scale is as follows:

A	90-100%	C+	75-79.9%	F	0-59.9%
B+	85-89.9%	C	70-74.9%		
B	80-84.9%	D	60-69.9%		

Attendance policy: As per UBCC policy, prompt attendance is required. Missing 15 minutes or more of any hour of class (arriving late and/or leaving early) will be considered an absence. A student absent more than 10% of the class meetings without a valid excuse may have his/her grade lowered one letter grade. Excused absences are limited to acute illness with a doctor's note, death in the immediate family, or religious holidays. Appropriate documentation is required. Absences totaling 20% or more of the class meetings – whether excused or not – will result in automatic failure of the course.

Makeup examinations: If a student misses an examination, a makeup examination will be given only if all of the following criteria are met:

1. The student provides documentation of an acute illness, death in the immediate family, or religious holiday.
2. The makeup examination is taken no later than seven calendar days after the missed examination unless other arrangements have been made.

It is the student's responsibility to contact the instructor and schedule the makeup examination. Failure to meet the above criteria will result in a grade of 0% for the missed examination.

Student conduct and class policies

- The goal of this course is to prepare the student to be a doctor; consequently, students are required to exhibit appropriate professional behavior and conduct in class.
- Any classroom behavior disruptive to the instructor or to other students is inappropriate and will not be tolerated.

Personal Electronics In Class:

All types of personal electronics (cell phones, computers, Blackberrys and PDAs) have become disruptive in classes and leaving class to talk on the phone is both disruptive and disrespectful. As a result all personal electronics will be turned off while in class. Any cell phone that rings or any personal electronic devices which are used during any portion of any class period will result in an unexcused absence for the whole class period. Exceptions are computer use that is requested by the instructor.

UBCC policies

This course abides by UBCC policies and these govern important aspects of professional conduct. As a reminder, please be aware that inappropriate test taking behavior is defined as any action, either overt or covert, on the part of a student taking the examination, which is deemed unacceptable by the faculty member or proctors in attendance. Penalties for cheating and other forms of unprofessional conduct include dismissal from the program. Please refer to the current UBCC student handbook for further details.

Course Objectives: At the end of this course, students should be able to:

1. Understand the basis for scientific research
2. Utilize research resources (books, journals, computer-data bases, world-wide web) effectively
3. Describe applicability of valid research in clinical practice
4. Describe the various clinical research methodologies.
5. Explain the concepts of validity and reliability.
6. Explain the importance of sensitivity, specificity and likelihood ratios.
7. Explain type 1 and type 2 error.
8. Explain p, statistical significance and basic statistical tests.
9. Explain basic concepts of clinical epidemiology
10. Construct a simple research proposal.

Projected lecture schedule by week and topic:

Week #	Date	Lecture	Required Reading Chapter
1	8/11	Introduction to Evidence Based Practice	1
2	8/18	Types of evidences and searching the literature	2 & 3
3	8/25	Searching the literature	3
4	9/1	Searching the literature & statistics	3 & 4
5	9/8	Statistics	4

6	9/15	Statistics	4
7	9/22	Experimental Designs	5
8	9/29	Experimental Designs	5
9	10/6	No Class – Midterm Examinations	
10	10/13	Literature reviews	6
11	10/20	Case Designs	7
12	10/27	Epidemiology	8
13	11/3	Epidemiology	8
14	11/10	Evaluation of Diagnostic Tests	9
15	11/17	Evaluation of Diagnostic Tests	9
16	11/24	Evidence Based Chiropractic	10
17	12/1	Conclusion	11
18	12/8	No Class Final Exams	

Syllabus may be amended: The information in this syllabus may be subject to change, and in such a case, the instructor will attempt to notify students in a timely manner.
