

Introduction to Research Methods PH1110

Schedule: T h 2:00 pm

Room:

Contact Information

Instructor: Tom D. Schulte, Ph.D., Professor

Office: Smith Bldg.

Office Hours T,W,Th 10:00am-1:00pm

Phone: 281-998-6083

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Course Materials

Required Text::

None

Suggested Readings:

Introduction to Research in the Health Sciences, S. Polgar & S. Thomas, 4th ed., Elsevier Churchill Livingstone

Medical Statistics Made Easy, M. Harris & G. Taylor, Martin Dunitz pub. ISBN: 185996219x

Bowling, A. 1997. Research Methods in health: Investigating Health and Health Services. Philadelphia, PA: Open University Press

Course Description

This course is designed to introduce students to basic research technique. It presents the importance and practicality of evidence-based evaluation inherent to a career in the health sciences. The course affords conceptual and practical skills in literature acquisition and review essential evidence-based learning and establishes foundations for critical thinking, inquiry and the nature of scientific philosophy relevant to both clinical research and therapeutic evaluation.

It is the hope of the instructor that students of this course develop a desire to further intellectual accomplishment. Research endeavors which contribute to mans base of knowledge should be shared with others of their and other health care professions, through scholarly publications, for the benefit of their patients.

The skills necessary for the development of original ideas for peer-reviewed publication will be cultivated. The sequence of course presentation is designed to inform the student of the scientific method, research designs, sources of funding and publication preparation techniques.

Learning Objectives:

The student will gain from this course:

- the ability to critically evaluate peer-reviewed literature
- the skills necessary for scientific publication.
- knowledge of the research method

These objectives comprise essential knowledge and skills for designing and publishing unbiased research.

Learning Outcomes:

Students must demonstrate the knowledge and ability to peruse the peer reviewed literature and compile a publishable review article.
They must also demonstrate a knowledge of research design and types and sources of funding.

Teaching Philosophy

The most likely path to success in this course is through reading the texts, attending lectures, participating in class discussions and reviewing each lecture. The course will consist of powerpoint lecture presentations over topics published in the required text, from the knowledge and experience of the instructor and from the current peer reviewed literature. Lectures will also include student discussion.

The student is responsible for material covered in lecture, in the required text and from other assignments and recommended resources.

The instructor will be responsible for presenting the course material in an understandable form, guided largely by the outline presented and evaluating students to determine mastery.

Student Responsibilities

Participation: expected

Homework: when assigned

Other Daily Responsibilities: as assigned

Projects: completed as required and on or before the scheduled date.

Tests/Exams: completed at or before the final exam schedule.

Course Content and Outline

Class Meeting Dates: Wednesday 1:00pm

Major Topics (by week)

1. Freshman Orientation
2. Introductory explanation, course description and structure
3. Library Usage and literature searching
4. What is a Literature Review – What's in it for you, What should it accomplish, and how is it structured.
5. Authors Following Directions and Frequently Asked Questions
6. Guide to Critical Appraisal of Research Publication – determining validity, identifying the hypothesis, reviewing the literature, analyzing statistics and determining best research design.
7. What is research and why do we participate in it? – What is it, who should be doing it, why do it and how to do it.
8. Literature search assistance (meet in the library) – librarian assisted literature searching.
9. The scientific research method – How does it work and how can it be misapplied
10. Experimental Design – Identifying, designing, performing and analyzing experiments.
11. Analyzing Project data – descriptive statistics
12. Clinical Epidemiology

13. Question & Answer concerning projects
14. Lab Final Week
15. Final exam

Due Dates for Assignments: literature reviews due no later than the thirteenth week of the trimester.

Final exams due no later than the scheduled date and time

Grading Method and Scale

Explanation of evaluation:

- Prepare a literature review
50% of course grade
- Final Exam (multiple choice)
50% of course grade

Grading Scale:

- A 90% and above
- B 80-89%
- C 68-79%
- F below 68%

Resources

Web-based (Blackboard) (<http://txchiro.blackboard.com/>)

Peer reviewed literature

Pubmed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>)

Hubmed (<http://www.hubmed.org/>)

Essential Policy Information

Attendance/Lateness Policy:

College policy

Policy for late assignments:

Assignments will not be accepted after the due date.

Policy for Missed Tests

Missing the final without a college excused absence will result in course failure.
Make-ups are to be scheduled with the instructor.

Policy for Extra Credit:

There is NO Extra Credit!!

Academic Honor Policy

Academic dishonesty is forbidden and will result in dismissal from the professional curriculum