



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman
College of Public Health

**Mel and Enid Zuckerman College of Public Health
University of Arizona**

HPS/BIOS/EHS/EPID/PHPM 609 Evaluating Public Health Literature

Catalog Description: Concepts for the critical analysis of the scientific literature within public health and the broader field of medicine are reviewed. Topics including understanding the research stream, study design, statistical methodology, and the accurate presentation of results are addressed. (1 unit)

Course Topics:

- Case Studies
- Phenomenology: individuals lived experience w/ disease
- Cross-Sectional Questionnaire
- Cohort or Case/Control
- RCT of Clinical Intervention
- Natural Experiment
- Economic Analysis

Course Objectives: During this course, students will:

- Conduct a systematic review of a peer-reviewed articles reporting the results of a research study with an emphasis placed on evaluating the strength of evidence, the potential biases, and implications for future public health practice.

Learning Outcomes (Competencies Obtained): Upon completion of this course students will be able to:

1. Interpret quantitative and qualitative data following current scientific standards
2. Communicate understanding of the assumptions necessary for a given statistical procedure as well as the ability to determine if the assumptions are met for a given data set
3. Demonstrate the ability to communicate effectively in writing reports, giving oral presentations, and teaching basic statistical material in a formal classroom setting
4. Judge, critique, synthesize, and interpret research findings
5. Develop a critical review of the literature
6. Organize and deliver clear oral presentations of research findings or health issues in varying professional formats
7. Teach epidemiological and/or biostatistical concepts in seminar, discussion groups, and the classroom
8. Engage competently, respectfully, and professionally with others, including persons from diverse backgrounds
9. Evaluate the integrity, comparability of data, and limitations of data
10. Make relevant inferences from data analyses and interprets results in a broader public health context
11. Understand and apply guidelines to support the principles of causality
12. Comprehensively review and evaluate the scientific data, and gather and/or analyze preliminary data to develop testable hypotheses, study design(s) and research assessment protocol(s)
13. Develop effective external written and oral communication skills for use with the public, government, and other professionals
14. Develop critical thinking and evaluation skills
15. Identify theories, concepts and models from a range of social and behavioral disciplines that guide health behavior health promotion research
16. Identify social, behavioral, biological, cultural and environmental influences, and posit their intersections, that affect healthy lifestyle and wellness of individuals and populations
17. Describe evidence gaps in the research literature on individual and societal benefits of health behavior health promotion interventions and policies

18. Conceptualize and apply evidence-based approaches to develop, implement or evaluate theory-based health behavior health promotion interventions
19. Conceptualize novel mixed method (qualitative and quantitative) studies to better clarify, model or address a current health behavioral research challenge
20. Execute (from planning, implementation, data collection, analysis, presentation of results, interpretation within the field) peer-review publication quality health behavioral studies