

Biological Markers in Health Research

NURS:7404:OEXW - Spring 2022 - open to doctoral students

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Course Description

Exponential increases in knowledge of biological mechanisms influencing health create a critical need for health care researchers to understand how these mechanisms and their interaction with other contextual factors (e.g. behaviors and environmental exposures) affect health.

This course introduces the use of biomarkers as 1) surrogate clinical endpoints, 2) measures of behavior, and 3) measures of exposures. The course will focus on the judicious integration of biomarkers into an overall program of health research in light of pertinent considerations, including validity and reliability, feasibility and cost.

Core Concepts

- biomarkers
- biological mechanisms
- environmental exposure
- health-related behaviors
- clinical endpoints
- surrogate biomarkers
- genomics
- epigenomics,
- transcriptomics
- metabolomics
- proteomics

Instructor

Sue Gardner, PhD, RN, FAAN



Dr. Gardner is Co-Director of Center for Advancing Multimorbidity and Symptom Science (P20) from the National Institute of Nursing Research. This Center's goal is to build the infrastructure to advance the care of individuals with multiple chronic conditions, including those who developed multiple conditions as a consequence of advanced cancer therapies.

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✉ lin-pierce@uiowa.edu

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☎ 319-335-7012