

Survey of Clinical & Translational Research

Summer Semester 2019

1 Graduate Credit Hour

BE-9070

Course Instructor

Jackie Knapke, PhD

Associate Director

Center for Continuing Professional Development (CCPD)

Email: jackie.knapke@uc.edu

Course Overview & Requirements

This self-paced course covers a wide variety of topics in clinical research, from interpreting regression and survival analysis to developing a successful relationship with a mentor. This course consists of 23 e-learning modules, (Flash movies and HTML files), and 11 timed quizzes in Blackboard. The e-learning modules include audio, video, and interactive quiz questions, (questions within the modules are not graded).

To receive full credit for this course, you must complete all 23 modules and 11 quizzes by July 31, 2019.

***Note:** This course is entirely self-directed—it is your responsibility to complete the modules and quizzes by the due date.

Course Technological Requirements

Computer with speakers or headphones, Mozilla Firefox Internet Browser, Adobe Flash Player, Adobe Reader, and Microsoft Word. For technical questions, Blackboard Support is available every day of the week at 513-556-1602 or blackboard@uc.edu.

E-learning Modules

The modules are available in the **Modules** area in Blackboard and can be accessed by clicking the appropriate link. Each module will open in a new window, so make sure that you have pop-ups enabled in your Internet browser. You can complete the modules at your own pace and in any order, as long as you complete all of them by 7/31/2018. The loading time will vary depending upon your computer and the speed of your Internet connection.

Quizzes

11 of the modules are accompanied by a brief quiz, (1-5 questions). These are available in the **Quizzes** area in Blackboard. It is recommended that you complete the quiz immediately or soon after you view the corresponding module. **The quizzes are timed, (15 minutes per quiz), and once you start the quiz, you must complete it. You are allowed two attempts at each quiz.** Each quiz question is worth 10 points.

***Note:** Use **Mozilla Firefox** for both the modules and the Blackboard quizzes.

Course Grading

This course is graded on a pass/fail basis. To receive a “Pass” for this course, you must complete all 23 modules and all 11 Blackboard quizzes by 7/31/19. If you do not, you will receive an “Incomplete” or “Fail” for the course.

Module Topics:

1. Humanism (45 minutes)

After completing this module, you will be able to:

- Define humanism and identify the three patient domains that need to be considered by the physician
- List the Core Principles and Core Values related to the exhibition of humanism in medicine
- Identify specific behaviors that demonstrate sensitivity to patients' diverse needs

2. Ethics in Clinical Care (45 minutes)

Principles of medical practice:

- Ethical aspects of physician/patient relations
- Physician/patient family relationships & physician/society relationships
- Personal/professional impacts of grief

3. Research Ethics (1 hour)

This module covers:

- Conflicts of interest
- Misconduct
- Principles of Research with Human Subjects
- Principles of Consent and Assent
- Vulnerable Populations

4. Statistical Tests (1 hour)

After completing this module, you will be able to:

- Understand the difference between descriptive and inferential statistics
- Understand the difference between parametric and non-parametric statistical tests
- Understand the use of the t-test, paired and non-paired, ANOVA, and chi-square test
- Calculate and interpret relative risk and odds ratio
- Understand the uses and limitations of a correlation coefficient
- Identify when to apply and how to interpret regression and survival analysis

5. Causation (45 minutes)

After completing this module, you will be able to:

- Identify the difference between association and causation
- Identify factors that strengthen causal inference in observational studies

6. Specialized Research Designs (45 minutes)

After completing this module, you will be able to:

- Describe the characteristics of Phase I, II, III, and IV clinical trials

- State the difference between clinical vs. statistical significance
- Assess the validity of clinical trials & apply research to clinical practice
- Identify empirical reviews of research

7. Fundamentals of Measurement (45 minutes)

After completing this module, you will be able to:

- Identify and describe types of variables
- Identify and describe the four principal characteristics of distributions
- Understand how the type of variable and its distribution affects the choice of a statistical test
- Understand measures of central tendency & variability

8. Seeking a Mentor (45 minutes)

After completing this module, you will be able to:

- Describe expectations from the mentoring relationship based on characteristics of successful relationships
- Determine the first step in approaching a prospective mentor
- Identify potential challenges and ways to avoid them

9. Preparing to be a Mentor (45 minutes)

After completing this module, you will be able to:

- Define mentoring and determine when mentoring is the best developmental option
- Utilize the mentoring model and tools to help engage in a mutually satisfying mentoring relationship
- Identify and address challenges that could surface in a mentoring relationship
- Determine measures to assess the effectiveness of the mentoring relationship

10. Review of Literature (30 minutes)

After completing this module, using the medical literature, you will be able to:

- Identify a clear, structured, searchable clinical question
- Identify the study design most likely to yield valid information
 - Diagnostic test
 - Benefits and/or harms of an intervention
 - Prognosis of a condition

11-12. Project Management Parts 1 & 2

13-14. Time Management Parts 1 & 2

15. Promoting Teamwork

16. Developing a Curriculum

17-19. Manuscript Writing Parts 1, 2 & 3

20-21. Grant Writing Parts 1 & 2

22-23. Evidence Based Medicine Parts 1 & 2

UNIVERSITY COURSE POLICIES

Course Contract: Upon officially registering for the course, the student assumes responsibility for understanding and complying with the entire contents of the course syllabus. It is the student's responsibility to raise questions or concerns directly with the instructor. The course instructor reserves the right to change, modify, add or delete any class assignment, reading, or activity at any time. Such changes will be made at the earliest possible time.

Academic Code of Conduct: Academic misconduct or dishonesty is defined in the University of Cincinnati Student Code of Conduct. Academic misconduct includes, but is not limited to: acts of cheating, plagiarism, falsification, and misappropriation of credit. The Student Code of Conduct defines behavior expected of all University of Cincinnati students. It is each student's responsibility to know and comply with the University's Student Code of Conduct. Disciplinary procedures are explained in a step-by-step manner, and the procedures for appeal of decisions are stated. (see: UC's Student Code of Conduct)

- Plagiarism is defined as:
 - Submitting another's published or unpublished work in whole, in part, or in paraphrase, as one's own without fully and properly crediting the author with footnotes, quotation marks, citations, or bibliographic reference.
 - Submitting as one's own original work, material obtained from an individual, agency, or the internet without reference to the person, agency or webpage as the source of the material.
 - Submitting as one's own original work material that has been produced through unacknowledged collaboration with others without release in writing from collaborators.
 - Submitting one's own previously written or oral work without modification and instructor permission.
- Plagiarism will not be tolerated and according to the Student Code of Conduct (https://www.uc.edu/conduct/Code_of_Conduct.html), may result in the following consequences:
 - Formal report of academic misconduct.
 - Reduced or failing grade on the exercise.
 - Reduced or failing grade for the course.
 - Recommendation to the College Hearing Panel/Dean/Provost for probation, suspension, or dismissal.

Disability: Students with disabilities who need academic accommodations or other specialized services while attending the University of Cincinnati will receive reasonable accommodations to meet their individual needs as well as advocacy assistance on disability-related issues. Students requiring special accommodation must register with the Disability Services Office. UC's Disability Services Office.

Counseling Services, Clifton Campus: Students have access to counseling and mental health care through the University Health Services (UHS), which can provide both psychotherapy and psychiatric

services. In addition, Counseling and Psychological Services (CAPS) can provide professional counseling upon request; students may receive five free counseling sessions through CAPS without insurance.

Students are encouraged to seek assistance for anxiety, depression, trauma/assault, adjustment to college life, interpersonal/relational difficulty, sexuality, family conflict, grief and loss, disordered eating and body image, alcohol and substance abuse, anger management, identity development and issues related to diversity, concerns associated with sexual orientation and spirituality concerns, as well as any other issue of concerns. After hours, students may call UHS at 513-556-2564 or CAPS Cares at 513-556-0648. For urgent physician consultation after-hours students may call 513-584-7777.

Title IX: Title IX is a federal civil rights law that prohibits discrimination on the basis of your actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also covers sexual violence, dating or domestic violence, and stalking. If you disclose a Title IX issue to me, I am required forward that information to the Title IX Office. They will follow up with you about how the University can take steps to address the impact on you and the community and make you aware of your rights and resources. Their priority is to make sure you are safe and successful here. You are not required to talk with the Title IX Office. If you would like to make a report of sex or gender-based discrimination, harassment or violence, or if you would like to know more about your rights and resources on campus, you can consult UC's webpage for Title IX or contact the office at 556-3349.