

# FUNDAMENTALS OF CLINICAL RESEARCH, GRADUATE/PROFESSIONAL CERTIFICATE

To conduct patient-oriented clinical studies adequately, it is necessary to understand the principles of research design and statistical analysis. With increasing complexities in clinical research, it is imperative that clinical researchers receive a minimum training in clinical research methods. The objective of the certificate in the fundamentals of clinical research is to provide formalized training in clinical research methodology and a practicum in research design and statistical analysis in patient-oriented clinical research. Areas of study include: biostatistics, epidemiology, research ethics and the responsible conduct of research, and clinical trials design and implementation.

## ADMISSIONS

Applications to the certificate program are considered on a rolling basis. Students in graduate or professional school at the UW–Madison simply apply in time to register for the semester in which they want to start the certificate courses.

Submit the Graduate or Professional Certificate application (<https://ictr.wisc.edu/documents/professional-certificate-in-the-fundamentals-of-clinical-research-application/>).

All forms and materials can be emailed in PDF form (preferred), delivered, or mailed to:

Deidre Vincevneus, Student Services Coordinator  
studentinquiry@ictr.wisc.edu  
2112 Health Sciences Learning Center  
750 Highland Avenue  
Madison, WI 53705

## REQUIREMENTS

The Certificate Program in the Fundamentals of Clinical Research consists of five courses for a total of 13-17 credits.

Code	Title	Credits
<b>Required Courses</b>		
<i>Graduate Entry-Level Biostatistics</i>		3-6
Students select one of the following:		
B M I/STAT 541	Introduction to Biostatistics	
B M I/ POP HLTH 551	Introduction to Biostatistics for Population Health	
& B M I/ POP HLTH 552	and Regression Methods for Population Health	
B M I 699	Independent Study <sup>1</sup>	
<i>Other Required Courses</i>		
B M I/STAT 542	Introduction to Clinical Trials I	3
B M I 544	Introduction to Clinical Trials II	3

POP HLTH/SOC 797	Introduction to Epidemiology	3
<b>One lecture course in ethical conduct of research selected from the following list of courses:</b>		<b>1-2</b>
SURG SCI 812	Research Ethics and Career Development	
NURSING 802	Ethics and the Responsible Conduct of Research	
ONCOLOGY 715	Ethics in Science	
PHARMACY 800	Research Ethics: Scientific Integrity and the Responsible Conduct of Research	
OBS&GYN 955	Responsible Conduct of Research for Biomedical Graduate Students	
BIOCHEM 729	Advanced Topics (Topic: Responsible Conduct of Research)	
<b>Total Credits</b>		<b>13-17</b>

<sup>1</sup> The 1-credit B M I 699 is for students with instructor consent who have prior statistics (not biostatistics) coursework. Students who take this option must also complete an additional 2 credits of FAM MED 701 or POP HLTH/MEDICINE/NURSING 705.

Questions can be directed to Deidre Vincevneus, Student Services Coordinator, at [studentinquiry@ictr.wisc.edu](mailto:studentinquiry@ictr.wisc.edu). (studentinquiry@ictr.wisc.edu)

## LEARNING OUTCOMES

1. Determine when it is appropriate to use a patient-oriented research design to investigate a translational clinical problem.
2. Understand the principles of clinical research design and statistical analysis.
3. Understand the principles of multidisciplinary patient-oriented clinical research protocols.
4. Apply and foster professional, ethical and responsible conduct of clinical research.