

# CLINICAL INVESTIGATION, PH.D.

Clinical investigation is a field in which teams of health care professionals, biostatisticians and others imagine, design, and conduct clinical research, and then take discoveries to human or animal patient populations in the health care system or in communities.

The focus of the Ph.D. in Clinical Investigation is to enable translational competency among team leaders. In other words, the graduate program trains students to help move research toward solutions for patient populations more quickly. The Ph.D. is one of fewer than 10 offered in the country with this focus.

Applicants ideally will have a health professional degree (M.D., DVM, Pharm.D., Ph.D., BSN, BSE, MPT, DPT). Clinical Investigation students are unique among UW–Madison graduate students because they enter the program with a terminal degree (with exceptions) and they are seeking training to directly apply their work with patients.

Full-time and part-time enrollment is available. Most core courses meet at 4 p.m. or later, to accommodate the schedules of working health professionals.

The graduate program in clinical investigation (GPCI) that offers the Ph.D. is housed in the UW Institute for Clinical and Translational Research (ICTR) and is designed in response to a need for clinical research training programs. The ICTR Clinical and Translational Science Award (CTSA) facilitates UW–Madison's ability to offer a spectrum of graduate programs in clinical research. This applied, clinical and translational graduate program complements the areas of clinical research training by the population health sciences, nursing, and other graduate programs.

Representatives from the schools of Medicine and Public Health, Nursing, Pharmacy, and Veterinary Medicine, and the College of Engineering met as a task force in 2006 to design the program. All ICTR academic partners are represented in the curriculum. They are joined by partner Marshfield Clinic as members of the faculty executive committee that guides the program.

The curriculum draws from existing courses in the partner schools, and includes new courses developed exclusively for the GPCI. Coursework provides a solid foundation in research methods and analysis, including biostatistics, study design, and ethical conduct. Through electives and a research requirement, students pursue their own areas of specialization in patient-oriented clinical research.

The knowledge and skills acquired while earning a degree in clinical investigation can be applied to jobs in academic institutions; private industry, including pharmaceutical companies, insurers and managed care organizations; government agencies; non-profit organizations; and a range of local to international organizations.

## ADMISSIONS

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website. Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet** the minimum requirements (<https://grad.wisc.edu/apply/requirements/>) of the Graduate School as well as the program(s).

Once you have researched the graduate program(s) you are interested in, apply online (<https://grad.wisc.edu/apply/>).

Requirements	Detail
Fall Deadline	February 1
Spring Deadline	The program does not admit in the spring.
Summer Deadline	The program does not admit in the summer.
GRE (Graduate Record Examinations)	May be required in certain cases; consult program.
English Proficiency Test	Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements ( <a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a> ).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	3

The program accepts applications each February 1 for the Ph.D. for the fall term only. Exceptions for spring admission are made rarely and only if the applicant has taken fall prerequisite courses.

The faculty executive committee for the program considers all aspects of each application. The applicant must meet the minimum requirements of the Graduate School plus those of the program, listed here:

- Have a focused area of interest in patient-oriented clinical research and a passion for continuing in a career in patient-oriented research
- Ideally have a health professional degree (M.D., DVM, Pharm.D., Ph.D., BSN, BSE, MPT, DPT).
- Have GRE scores if the applicant does not have a graduate or medical professional degree from a U.S. institution
- Identify a primary advisor to mentor and support the applicant throughout graduate study.

Acceptance into the program will depend in part on identification of a research program that aligns with a student's research interests and career goals, a student's fit with the program and likelihood of successfully completing a graduate degree. Identification of a faculty advisor and research area of study is a key consideration in the admissions process but does not guarantee admission.

Acceptance into the program does not assure funding.

## FUNDING

## GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (<https://grad.wisc.edu/funding/>) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

## PROGRAM RESOURCES

Prospective Ph.D. students should see the program website (<https://ictr.wisc.edu/graduate-program-in-clinical-investigation/>) for funding information.

## REQUIREMENTS

### MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), in addition to the program requirements listed below.

### MAJOR REQUIREMENTS

#### MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	Yes	No	Yes	Yes

#### Mode of Instruction Definitions

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

**Evening/Weekend:** Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

### CURRICULAR REQUIREMENTS

#### Requirements Detail

Minimum Credit Requirement	51 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	Half of degree coursework (26 credits out of 51 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide.
Overall Graduate GPA Requirement	3.00 GPA required.
Other Grade Requirements	Students must earn a B or above in all core curriculum coursework.

**Assessments and Examinations** Oral preliminary exam required. Defense of Ph.D. dissertation required. The dissertation is submitted in writing to the degree committee two weeks prior to the defense date, and then defended verbally during the defense meeting.

**Language Requirements** No language requirements.

**Doctoral Minor/Breadth Requirements** Doctoral students in Clinical Investigation are not required to complete a doctoral minor. Breadth is achieved in other areas of the curriculum.

### REQUIRED COURSES

Code	Title	Credits
POP HLTH/SOC 797	Introduction to Epidemiology	3
NURSING/MEDICINE/POP HLTH 705	Seminar in Interdisciplinary Clinical Research Evidence	2
FAM MED 701	Perspectives in Multidisciplinary Clinical & Translational Research	2
B M I 773	Clinical Research Informatics	3
CS&D 900	Seminar-Speech Science (Topic: Research Career Development Seminar on Grant Writing)	2-3
B M I/STAT 542	Introduction to Clinical Trials I	3
B M I 544	Introduction to Clinical Trials II	3
A graduate entry level biostatistics course. Students select one of the following:		1-6
B M I/STAT 541	Introduction to Biostatistics	
B M I 699	Independent Study (Topic: Introduction to Biostatistics) <sup>1</sup>	
B M I/POP HLTH 551 & B M I/POP HLTH 552	Introduction to Biostatistics for Population Health and Regression Methods for Population Health <sup>2</sup>	
An intermediate statistics/research methods course. Possible course selections include:		3
COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA/RP & SE 719	Introduction to Qualitative Research	
ED PSYCH 760	Statistical Methods Applied to Education I	
NURSING 804	Advanced Qualitative Design and Methods	
SOC/C&E SOC 360	Statistics for Sociologists I	
Advanced statistics or analytical methods courses. Students are encouraged to consult the program administrator about their options, such as:		6
POP HLTH/B M I 552	Regression Methods for Population Health	
SOC/C&E SOC 360	Statistics for Sociologists I	
SOC/C&E SOC 361	Statistics for Sociologists II	

STAT/F&W ECOL/ Statistical Methods for Bioscience II  
HORT 572

One lecture course in the Responsible (Ethical) Conduct of Research selected from the following list or an equivalent course approved by the Executive Committee: 1-2

ONCOLOGY 715	Ethics in Science
BIOCHEM 729	Advanced Topics (Topic: Responsible (Ethical) Conduct of Research)
PHARMACY 800	Research Ethics: Scientific Integrity and the Responsible Conduct of Research
SURG SCI 812	Research Ethics and Career Development
OBS&GYN 955	Responsible Conduct of Research for Biomedical Graduate Students
NURSING 802	Ethics and the Responsible Conduct of Research

A noncredit regulatory experience activity: Students attend PHARMACY 800, sign a confidentiality agreement, review a protocol submitted to an Institutional Review Board, and attend an IRB meeting (supervised). This activity is also known as the RCR Laboratory.

Research credits (and possible electives)

**Total Credits** 51

<sup>1</sup> The 1-credit B M I 699 is for students with instructor consent who have prior statistics (no biostatistics coursework). Students who take this option must also complete an additional 2 credits of PHM PRAC 490 or FAM MED 701; or POP HLTH/MEDICINE/ NURSING 705.

<sup>2</sup> Students who complete this 6-credit sequence are required to take fewer research credits to compensate.

graduate careers part time as Special students, the program may allow up to 15 such credits for M.S. and Ph.D. students. Courses taken as a Special Student numbered under the 700 level do not count toward the 50% graduate coursework requirement.

## PROBATION

A semester GPA below 3.0 will result in the student being placed on academic probation. If a semester GPA of 3.0 is not attained during the subsequent semester of full time enrollment (or 12 credits of enrollment if enrolled part-time) the student may be dismissed from the program or allowed to continue for 1 additional semester based on advisor appeal to the Graduate School.

## ADVISOR / COMMITTEE

Ph.D. students select their faculty advising (degree) committees by the end of the first year in the program. Students and the advisors who sign the Proposed Degree Committee form are asked to meet annually or more; dissertators (post-preliminary exam) twice a year or more.

## CREDITS PER TERM ALLOWED

12 credits

## TIME CONSTRAINTS

Doctoral students are expected to pass the final oral examination and deposit the dissertation no later than five years from the date of passing the preliminary examination. The oral examination is the oral defense of the completed dissertation. Full-time students generally complete the dissertation within two years of the preliminary examination. Part-time students may take longer.

Doctoral degree students who have been absent for ten or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

## GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (<https://doso.students.wisc.edu/bias-or-hate-reporting/>)
- Graduate Assistantship Policies and Procedures (<https://hr.wisc.edu/policies/gapp/#grievance-procedure>)
- Hostile and Intimidating Behavior Policies and Procedures (<https://hr.wisc.edu/hib/>)
  - Office of the Provost for Faculty and Staff Affairs (<https://facstaff.provost.wisc.edu/>)
- Dean of Students Office (<https://doso.students.wisc.edu/>) (for all students to seek grievance assistance and support)
- Employee Assistance (<http://www.eao.wisc.edu/>) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (<https://employeedisabilities.wisc.edu/>) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (<https://grad.wisc.edu/>) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)

## POLICIES

### GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

### MAJOR-SPECIFIC POLICIES

#### PRIOR COURSEWORK

##### Graduate Work from Other Institutions

With program approval, a Ph.D. student's graduate coursework from other institutions no longer than ten years ago may count toward the degree.

##### UW-Madison Undergraduate

No credits from a UW-Madison undergraduate degree are allowed to count toward the degree.

##### UW-Madison University Special

With program approval, Ph.D. students may be allowed to count graduate level courses that they took as a Special student. Because the program provides flexibility to clinical professionals who frequently begin their

- Office of Compliance (<https://compliance.wisc.edu/>) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (<https://conduct.students.wisc.edu/>) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (<http://www.ombuds.wisc.edu/>) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (<https://compliance.wisc.edu/titleix/>) (for concerns about discrimination)

Grievance Procedures (from Graduate Program in Clinical Investigation Student Handbook 2019-2020)

Procedures for proper accounting of student grievances:

1. The student is encouraged to speak first with the person toward whom the grievance is directed to see if a situation can be resolved at this level.
2. Should a satisfactory resolution not be achieved, the student should contact the program's Grievance Advisor or Director of Graduate Studies to discuss the grievance. The Grievance Advisor or Director of Graduate Studies will facilitate problem resolution through informal channels and facilitate any complaints or issues of students. The first attempt is to help students informally address the grievance prior to any formal complaint. Students are also encouraged to talk with their faculty advisors regarding concerns or difficulties if necessary. University resources for sexual harassment, discrimination, disability accommodations, and other related concerns can be found above.
3. If the issue is not resolved to the student's satisfaction the student can submit the grievance to the Grievance Advisor in writing, within 60 calendar days of the alleged unfair treatment.
4. On receipt of a written complaint, a faculty committee will be convened by the Grievance Advisor to manage the grievance. The program faculty committee will obtain a written response from the person toward whom the complaint is directed. This response will be shared with the person filing the grievance.
5. The faculty committee will determine a decision regarding the grievance. The Grievance Advisor will report on the action taken by the committee in writing to both the student and the party toward whom the complaint was directed within 15 working days from the date the complaint was received.
6. At this point, if either party (the student or the person toward whom the grievance is directed) is unsatisfied with the decision of the faculty committee, the party may file a written appeal. Either party has 10 working days to file a written appeal to the School/College.
7. Documentation of the grievance will be stored for at least 7 years. Significant grievances that set a precedent will be stored indefinitely.

The Graduate School has procedures for students wishing to appeal a grievance decision made at the school/college level: <https://grad.wisc.edu/documents/grievances-and-appeals/>

## OTHER

Full-time Ph.D. students and dual degree students are eligible for NIH funding. Students must obtain a faculty adviser, and write a detailed personal statement that demonstrates working knowledge of clinical and/or translational research. No rotations are offered.

## PROFESSIONAL DEVELOPMENT

### GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (<https://grad.wisc.edu/pd/>) to build skills, thrive academically, and launch your career.

### PROGRAM RESOURCES

See the ICTR website (<https://ictr.wisc.edu/>) for more information.

## LEARNING OUTCOMES

1. Lead to translation of research among the laboratory, clinic and population through technological or systems innovations, including but not limited to drug therapies, medical devices, biological materials, clinical processes, and/or behavioral interventions.
2. Are appropriately patient-oriented.
3. Draw on the expertise of collaborators in multiple disciplines.
4. Integrate clinical and translational science across multiple departments, schools and colleges, clinical and research institutes, and healthcare delivery organizations.
5. Determine when it is appropriate to use a patient-oriented research design to investigate a translational clinical problem.
6. Analyze, interpret and report research findings of clinical studies through peer-reviewed scientific channels and to a lay audience.
7. Disseminate knowledge through teaching and mentoring students/trainees.
8. Apply and foster professional, ethical and responsible conduct of clinical research.

## PEOPLE

Faculty (<https://ictr.wisc.edu/graduate-program-in-clinical-investigation/>)