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 51-credit 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 the 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 graduate program.

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.

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.

Graduate admissions is a two-step process between academic degree programs and the Graduate School. Applicants must meet requirements of both the program(s) and the Graduate School. Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/admissions).

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 processes related to funding.

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

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), 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

**Evening/Weekend:** These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connections, while keeping your day job. For more information about the meeting schedule of a specific program, contact the program.

**Online:** These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules.

Take advantage of the convenience of online learning while participating in a rich, interactive learning environment. For more information about the online nature of a specific program, contact the program.

**Hybrid:** These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For more information about the hybrid schedule of a specific program, contact the program.

**Accelerated:** These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

CURRICULAR REQUIREMENTS

Minimum Credit Requirement

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Minimum Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>32 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>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.</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required</td>
</tr>
</tbody>
</table>

Other Grade Requirement

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSING/ MEDICINE/ POP HLTH 705</td>
<td>Seminar in Interdisciplinary Clinical Research Evidence</td>
<td>2</td>
</tr>
<tr>
<td>FAM MED 701</td>
<td>Perspectives in Multidisciplinary Clinical &amp; Translational Research</td>
<td>2</td>
</tr>
<tr>
<td>A graduate entry level biostatistics course. Possible course selections include:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B M I/STAT 541</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>B M I 699</td>
<td>Independent Study (Topic: Introduction to Biostatistics)</td>
<td></td>
</tr>
<tr>
<td>STAT/F&amp;W ECOL/ HORT 571</td>
<td>Statistical Methods for Bioscience I</td>
<td></td>
</tr>
<tr>
<td>An intermediate statistics course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B M I/STAT 542</td>
<td>Introduction to Clinical Trials I</td>
<td>3</td>
</tr>
<tr>
<td>B M I 544</td>
<td>Introduction to Clinical Trials II</td>
<td>3</td>
</tr>
<tr>
<td>One lecture course in the Responsible (Ethical) Conduct of Research selected from the following list or an equivalent course approved by the Executive Committee:</td>
<td></td>
<td></td>
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<tr>
<td>MED HIST 545</td>
<td>Ethical and Regulatory Issues in Clinical Investigation</td>
<td></td>
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<tr>
<td>PHARMACY 800</td>
<td>Research Ethics: Scientific Integrity and the Responsible Conduct of Research</td>
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<tr>
<td>SURG SCI 812</td>
<td>Research Ethics and Career Development</td>
<td></td>
</tr>
<tr>
<td>OBS&amp;GYN 955</td>
<td>Responsible Conduct of Research for Biomedical Graduate Students</td>
<td></td>
</tr>
<tr>
<td>NURSING 802</td>
<td>Ethics and the Responsible Conduct of Research</td>
<td></td>
</tr>
<tr>
<td>ONCOLOGY 675</td>
<td>Advanced or Special Topics in Cancer Research</td>
<td></td>
</tr>
<tr>
<td>POP HLTH/SOC 797</td>
<td>Introduction to Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>A noncredit regulatory experiance 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. Advanced statistics or analytical methods courses. Students are encouraged to consult the program administrator about their options, such as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT/F&amp;W ECOL/ HORT 572</td>
<td>Statistical Methods for Bioscience II</td>
<td></td>
</tr>
<tr>
<td>SOC 751</td>
<td>Survey Methods for Social Research</td>
<td></td>
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<tr>
<td>SOC/ C&amp;E SOC 360</td>
<td>Statistics for Sociologists I</td>
<td></td>
</tr>
<tr>
<td>SOC/ C&amp;E SOC 361</td>
<td>Statistics for Sociologists II</td>
<td></td>
</tr>
<tr>
<td>STAT/B M I 642</td>
<td>Statistical Methods for Epidemiology</td>
<td></td>
</tr>
<tr>
<td>B M I 1773</td>
<td>Clinical Research Informatics</td>
<td>3</td>
</tr>
<tr>
<td>CS&amp;D 900</td>
<td>Seminar-Speech Science (Topic: Research Career Development Seminar on Grant Writing)</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Doctoral Dissertation Research 18
The 1-credit BMI 699 Independent Study is for students with instructor consent who have prior statistics (not biostatistics) coursework.

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

GRADUATE PROGRAM HANDBOOK


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 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.

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.


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)