



## PhD Minor with a focus in Clinical and Translational Science

The PhD Minor in Clinical Investigation, also known as a biomedical PhD with a focus on clinical and translational science (PhD<sup>CTS</sup>), requires 10 credits as described below:

### PhD Minor Students should be aware of two policies:

- Students with permission to take the 1-credit required biostats course who then take ethics and electives courses for the low end of possible credits might have to take another elective course, because 10 credits minimum are required for the Minor.
  - No course that counts for the major can also count for the minor. Frequently this means that students have to take two ethics courses – one for the major and one for the minor.
1. **Biostatistics and Medical Informatics 541 (3 credits) or 699 (1 credit)** Both courses require instructor consent. The 1-credit BMI 699 is for students who have prior statistics (not biostatistics) coursework.
  2. **Biostatistics and Medical Informatics 542 Introduction to Clinical Trials I (3 credits, Spring)** Course emphasis is on clinical trials study design. BMI 541 (or equivalent) is a prerequisite.
  3. **One lecture course in the Responsible (Ethical) Conduct of Research (1-2 credits)** selected from the following list or an equivalent course approved by the Executive Committee:
    - a) **Med Hist 545 Ethical and Regulatory Issues in Clinical Investigation (1 credit, Fall)**
    - b) **Pharmacy 800 Research Ethics, Scientific Integrity and the Responsible Conduct of Research (2 credits, alternate Falls, 2018, 2020, etc.)**
    - c) **Vet Med/Surgical Science 812 Research Ethics & Career Development (2 credits, Fall)**
    - d) **Ob/Gyn 955 Responsible Conduct of Research for Biomedical Students (2 credits, Fall)**
    - e) **Nursing 802 Ethics and Responsible Conduct of Research (1 credit, Spring)**
    - f) **Oncology 675 Appropriate Conduct of Science (listed as "Advanced or Special Topics," 1 credit, Spring)**
  4. **Elective courses** to reach at least 10 credits total from the GPCI curriculum, selected from the following:
    - a) **Nursing 705 Seminar in Interdisciplinary Clinical Research Evidence (2 credits, Summer)**
    - b) **Family Medicine 701 Perspectives in Multidisciplinary Clinical and Translational Research (2 credits, Fall)** An overview of clinical investigation and translational research.
    - c) **Population Health Sciences 797 Introduction to Epidemiology (3 credits, Fall)**
    - d) **Biostatistics and Medical Informatics 544 Introduction to Clinical Trials II (3 credits, Fall)** Course emphasis is on clinical trial implementation and management, regulatory requirements, and data collection and management strategies. BMI 542 is a prerequisite.

**Procedure to Declare the Minor in Clinical Investigation.** After discussion with his or her major faculty advisor, the student completes and submits the Intent to Complete a PhD Minor form. The form specifies the proposed courses to meet the minor requirements, a timetable for taking the courses, and a signature by the student's advisor. Under Graduate School definitions, the Minor in Clinical Investigation is an External (Option A) minor. The program requires that the student also submit a current resume, biosketch or Curriculum Vitae. The Minor in Clinical Investigation also requires that the student become a member of ICTR (free). Once the form and all required steps have been completed, the student may begin the PhD Minor coursework.

