

Ph.D. in Clinical Translational Sciences

Sample Curriculum for Tucson Students:

Required Courses*

- Principles:
 - Cellular, Molecular and Neural Biology (CTS 555) – 6 units [*for post-baccalaureate students*]; OR
 - Principles of Clinical Research I and II (CTS 501 and CTS 502, 4 units each); OR
 - Principles of Surgery or Principles of Medicine (CTS 610 or CTS 620A/B/C) – 3-6 units [*for postgraduate students*]; OR
 - A principles/fundamentals course in a discipline relevant to the student's research interests (3 or more units), as approved by CTS and the faculty mentor [*post-baccalaureate students*]
- Professional Development Series - minimum 4 units, including:
 - Responsible Conduct of Research (CTS 595C) – 1 unit/semester; taken Fall and Spring semesters [required]And an additional 2 units chosen from:
 - Individualized Scientific Writing (CTS 585) – 2 units
 - InnoVention and Entrepreneurship in Medicine (CTS 590A) – 1 unit
 - Professional & Career Training Series (CTS 595D) – 2 units
 - Scientific Writing, Presentation and Bioethics (PS 595b) – 2 units
 - Scientific Grantsmanship (IMB 521) – 2 units
 - Or similar courses in other departments.
- Biostatistics:
 - Biostatistics in Public Health (BIOS 576A) – 3 units
- Seminar and/or journal club/colloquium – 6 units total (1 unit per enrollment; 6 total enrollments).
 - Students may take any regularly scheduled graduate seminar course in a department relevant to the student's research interests. *Postgraduate students may earn credit in CTS 696A for attendance at relevant grand rounds series in a clinical department.***
 - Students may take any regularly scheduled graduate journal club/colloquium course in a department relevant to the student's research interests. *Postgraduate students may earn credit in CTS 595 for participation in clinical case conferences or a clinical department journal club.***
- Dissertation (CTS 920) – 18 units

* May substitute other courses with CTS approval with the exception of CTS 920.

** Seminar or journal club credit for activities other than CTS courses toward Ph.D. requires prior approval from CTS.

Elective Options

Students may use any graduate courses approved by their faculty mentor as electives to meet the remaining Ph.D. unit requirements.

Sample elective courses:

- Current Topics in Translational Medicine (CMM 604) – 2 units
- Experimental Design (CBIO 597A) – 1 unit

- Basic Principles of Epidemiology (EPID 573A) – 3 units
- Biostatistics for Research (BIOS 576B) – 3 units
- Neuropharmacology (PHCL 553) – 3 units
- Introduction to Biomedical Informatics (BME 577) – 3 units
- Mechanisms of Human Diseases (PATH 515) – 4 units
- Cardiovascular Physiology (PSIO 585) – 3 units
- **Or** any other graduate courses recommended by the faculty mentor.