## Ph.D. in Clinical Translational Sciences

## **Sample Curriculum for Phoenix Students:**

## **Required Courses \***

- Principles:
  - o Fundamentals of Clinical Translational Science (CTS 500) 4 units; OR
  - o 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, offered Fall and Spring semester; OR
  - Principles of Surgery or Principles of Medicine (CTS 610 or CTS 620A/B/C) 3-6 units [for postgraduate students].
- Professional Development Series minimum 4 units chosen from:
  - 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
- o Professional & Career Training Series (CTS 595D) 2 units [for post-baccalaureate students]
- o Or similar courses in other departments by prior approval of the CTS program.
- Biostatistics:
  - o Biostatistics in Public Health (BIOS 576A) 3 units [offered online in Spring semester].
- Seminar and/or journal club/colloquium 4 units total (1 unit per enrollment; 4 total enrollments).
  - Biomedical Sciences Journal Colloquium (CTS 595) semester offered and topic differ by instructor/section.
  - o Biomedical Sciences Seminar (CTS 696B) offered Fall and Spring semester.
  - Students may take any regularly scheduled graduate seminar course in a department relevant to the student's research interests. The CTS Director of Graduate Affairs can inquire whether a Phoenix student can join and participate remotely in a Tucson-based seminar. 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. The CTS Director of Graduate Affairs
    can inquire whether a Phoenix student can join and participate remotely in a Tucson-based
    journal club. Postgraduate students may earn credit in CTS 595 for participation in clinical case
    conferences or a clinical department journal club.\*\*
- Dissertation Research (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**

- Informatics for Clinical Research (CTS 503) 4 units [offered Spring semester]
- Neurodevelopment in Action (CTS 572) 4 units [offered Spring semester]
- Human Systems Neuroscience (CTS 556) 3 units [offered Spring semester]
- Functional Human Histology (CMM 525A) 4 units [offered online in Fall semester]

- Basic Principles of Epidemiology (EPID 573A) 3 units [offered online in Fall and Spring semester]
- Inflammation and Immune Pathology (CMM 550) 1 unit [offered online in Spring semester]
- Immunology Basics (CMM 537) 1 unit [offered online in Spring semester]
- o Fundamentals of Cardiovascular Hematology (MEDP 620) 6 units [offered Spring semester]
- Neuropharmacology (PHCL 553) 3 units [offered Spring semester with video link to Phoenix campus]
- Or any other graduate courses recommended by the faculty mentor, including courses offered online.