M.S. 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** – 2 units total (1 unit per enrollment; 2 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.**

- **Thesis** (CTS 910) – 6 units
  
  * May substitute other courses with CTS approval with the exception of CTS 910.
  ** 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 M.S. 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.