



Students must complete the following courses (10 hours):

- Learning Health System Team Science Practicum (THSS 733, 2 hours)
- Introduction to Biomedical Informatics for the LHS (THSS 731, 2 hours)
- Principles of Implementation Science (THSS 736, 2 hours)
- Learning Health System Colloquium (THSS 738, 1 hour; 0.5 hours across 2 terms)
- Organizational Change in Health Systems (THSS 737, 2 hours)
- Building Successful Teams (THSS 735, 0.5 hour)
- Leading Successful Teams (THSS 739, 0.5 hour)

Students must also complete at least 5 hours from the following courses:

- Epidemiology (THSS 720, 4 hours)
- Clinical Trial Methods (THSS 742, 3 hours)
- Translational Research Methods I (THSS 748, 2 hours)
- Translational Research Methods II (THSS 749, 3 hours)
- Scientific Writing for Papers and Proposals (THSS 740, 2 hours)
- Research Grant Preparation (THSS 741, 1 hour)
- Ethics and Responsibility in THSS I and II (THSS 703 and 704, 2 hours; 1 hour across 2 terms)*
- Introduction to Biostatistics (THSS 730, 4 hours)**
- Statistical Modeling (THSS 732, 4 hours)**
- Other electives as approved by the program directors

*All certificate students will be required to take the THSS ethics sequence (THSS 703 & 704) or to demonstrate satisfactory prior completion of equivalent coursework, as determined by the course directors in consultation with the program directors. All certificate students must also complete CITI certification during the first 2 semesters or provide a current CITI completion certificate.

**Participants entering the certificate program must enroll in one of the THSS statistics courses (730 or 732) or provide evidence of successful completion (A or B) of at least one graduate-level statistics course.