

Requirements for Dual Major Doctoral Degrees: STT and CMSE

Background information on current requirements for the Ph.D. Program in STT

1. **Core courses** for Ph.D. in Statistics: STT 872, STT 881-2, STT 867-868 **(15 credits)**
2. **Preliminary exams:** one in statistics, and one in probability
3. **Five elective courses (15 credits)** from
 - Advanced Probability: STT 961, STT 962, STT 964, STT 996
 - Advanced Statistics: STT 873, STT 874, STT 951, STT 953, STT 997
4. **Thesis:** A doctoral candidate must demonstrate the ability to carry out significant original research in statistics and/or probability.

Suggested requirements for Track 1 (STT is the primary department)

1. **Core courses:** STT872, STT881, 2 courses from core courses of the dual department's PhD program, one course selected from STT 882, STT867, STT868 **(15 credits)**.
2. **Pass at least 2 prelim exams:** either two STT prelim exams; or at least one prelim exam from STT and at least one exam from the other department. The student chooses which exams to take, and gets approval from his/her guidance committee and the Graduate Directors from respective departments as outlined in MSU's dual major doctoral degree requirements.
3. **Five electives (15 credits, at least 3 courses from STT)** from
 - Core sequence: STT 882, STT867, STT868 (exclude those chosen in core)
 - The other department's PhD level courses
 - Advanced Probability: STT 961, STT 962, STT 964, STT 996
 - Advanced Statistics: STT 873, STT 874, STT 951, STT 953, STT 997

Remarks

- Thesis must contain a majority portion of original research in statistics and/or probability and a significant component from the core areas of the other department. At least 50% of the committee members must have primary appointments in STT.
- At least one year of funding from the other department is expected but not required. If the other department's graduate student support is mainly from funded research, such as engineering and the biosciences, then partial funding from outside STT is strongly expected, and will typically be expected for more than one year.

Suggested courses requirements for Track 2 (STT is the secondary department)

1. **Core courses:** STT872, STT881, 3 courses from core courses of the dual department's PhD program **(15 credits)**
2. **Pass at least one STT prelim exams**
3. **Five electives (15 credits, at least 2 courses from STT)** from

- Core Ph.D. sequence: STT 882, STT867, STT868
- The other department's PhD level courses
- Advanced Probability: STT 961, STT 962, STT 964, STT 996
- Advanced Statistics: STT 873, STT 874, STT 951, STT 953, STT 997

Remarks

- Thesis must contain a significant portion of original research in statistics and/or probability; or applications of cutting-edge statistics/probability methodology in other scientific fields. At least 25% of the committee members must be with primary appointments in STT.
- STT will not fund these students except in special circumstances.
- If a STT student chooses a Ph.D. advisor whose primary appointment is not in STT, it is expected that he/she secures at least 3 years of funding from outside of STT. Exceptions must be approved by the STT Graduate Director and the STT Chair.