

DATA SCIENCE GRADUATE MINOR

Graduate School

Program Website (<https://stat.cornell.edu/academics/phd-minor-data-science/>)

Program Description

The minor field of data science prepares students to work on data-intensive applications. Many employers actively seek applicants with data science skills and minoring in data science will widen a student's set of career paths substantially.

Students take courses in four areas: computation, statistical modeling and inference, optimization, and ethical, legal, and policy issues. The DGS will maintain a list of courses in each of these areas. The courses that a student uses towards the minor must be in at least two of the four areas, and no more than two courses in any one of the areas can be used towards the minor.

A Ph.D. student minors in the field of data science by adding a faculty member in the field as a minor member of the student's committee.

Graduate Minor Requirements

To minor in Data Science (DS), a student must have a member of this field on the student's committee. Students can nominate a Data Science field faculty member (<https://stat.cornell.edu/academics/phd-minor-data-science/data-science-field-faculty/>) to their committee through Student Center. Be sure that the field faculty member is listed as a Minor Member for Data Science.

The minor member will record the courses taken in the minor on a form supplied by the field. The completed form will be given to the Chair of the student's committee, e.g., at the B-exam.

Required Coursework

The course requirement is at least 4 courses and at least 14 credit hours. All courses used for satisfying Data Science Minor requirements must be numbered 5000 or higher with at least 6 credit hours numbered 6000 or higher. All courses used towards the minor must be completed with a letter grade of B or better. Courses will be in four areas: computation, statistical modeling and inference, optimization, and ethical, legal, and policy issues. The DGS will maintain a list of courses (<https://stat.cornell.edu/academics/phd-minor-data-science/requirements/>) in each of these areas. The courses that a student uses towards the minor must be in at least two of the four areas, and no more than two courses in any one of the areas can be used towards the minor. A student's course selection must be approved by the minor committee member.

At most two of the four courses used towards the minor in DS can be courses in the student's major or courses cross-listed in the major, e.g., a CS major can use at most two CS courses or courses cross-listed as CS courses. At least two courses used for the DS minor must be courses not used for the major or for a second minor.

Learning Outcomes

- Demonstrated ability to extract meaningful information from complex data sets and quantify uncertainty about that information.
- Demonstrated ability to apply data science techniques, e.g., statistical analysis and computation, to the student's major.
- Awareness of ethical, legal, and policy issues pertaining to Data Science.