STATISTICS: DATA SCIENCE, M.S.

This is a named option in the Statistics M.S. (http://guide.wisc.edu/graduate/statistics/statistics-ms/#text)

ADMISSIONS

Students holding a bachelor’s degree with a natural science, social science, or engineering major and strong mathematical background are encouraged to apply for admission to the graduate program in statistics. Students are advised to undertake graduate work in statistics only if their undergraduate grades in mathematics were uniformly high. Students cannot get credit for more than one of STAT 301 Introduction to Statistical Methods, STAT 324 Introductory Applied Statistics for Engineers, or STAT 371 Introductory Applied Statistics for the Life Sciences.

GRADUATE SCHOOL ADMISSIONS

Graduate admissions is a two-step process between academic degree programs and the Graduate School. Applicants must meet requirements of both the program(s) and the Graduate School. Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/admissions).

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding) is available from the Graduate School. Be sure to check with your program for individual policies and processes related to funding.

PROGRAM RESOURCES

Prospective students should see the program website (http://www.stat.wisc.edu/financial-aid) for funding information.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

Evening/Weekend: These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connections, while keeping your day job. For more information about the meeting schedule of a specific program, contact the program.

Online: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules. Take advantage of the convenience of online learning while participating in a rich, interactive learning environment. For more information about the online nature of a specific program, contact the program.

Hybrid: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For more information about the hybrid schedule of a specific program, contact the program.

Accelerated: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

CURRICULAR REQUIREMENTS

Minimum Credit Requirement

<table>
<thead>
<tr>
<th>Minimum Residence Credit Requirement</th>
<th>16 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university’s Course Guide (<a href="https://registrar.wisc.edu/course-guide/">https://registrar.wisc.edu/course-guide/</a>).</td>
</tr>
</tbody>
</table>

Overall Graduate GPA Requirement

3.00 GPA required.

Other Grade Requirements

A grade of B or better must be received in any course used to fulfill the required and elective course requirements.

Assessments and Examinations

Students must pass a competency test containing both a written and an oral component, demonstrating that they have the potential to be a practicing statistician.

Language Requirements

No language requirements.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 601</td>
<td>Statistical Methods I</td>
<td>4</td>
</tr>
<tr>
<td>STAT 602</td>
<td>Statistical Methods II</td>
<td>4</td>
</tr>
<tr>
<td>STAT 609</td>
<td>Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 610</td>
<td>Introduction to Statistical Inference</td>
<td>4</td>
</tr>
<tr>
<td>Four to six credits from:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 627</td>
<td>Professional Skills in Data Science</td>
<td>1-3</td>
</tr>
<tr>
<td>STAT 628</td>
<td>Data Science Practicum</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Or EPD professional competency courses or other courses approved by the MS-DS program
11 or more elective credits from Statistics courses, 6 of which must be numbered above 610:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 349</td>
<td>Introduction to Time Series</td>
</tr>
<tr>
<td>STAT 351</td>
<td>Introductory Nonparametric Statistics</td>
</tr>
<tr>
<td>STAT 411</td>
<td>An Introduction to Sample Survey Theory and Methods</td>
</tr>
<tr>
<td>STAT 421</td>
<td>Applied Categorical Data Analysis</td>
</tr>
<tr>
<td>STAT 456</td>
<td>Applied Multivariate Analysis</td>
</tr>
<tr>
<td>STAT 461</td>
<td>Financial Statistics</td>
</tr>
<tr>
<td>STAT/COMP SCI 471</td>
<td>Introduction to Computational Statistics</td>
</tr>
<tr>
<td>STAT 479</td>
<td>Special Topics in Statistics</td>
</tr>
<tr>
<td>STAT 575</td>
<td>Statistical Methods for Spatial Data</td>
</tr>
</tbody>
</table>

Other courses numbered above 610

Total Credits 17-21

GRADUATE SCHOOL POLICIES
The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

NAMED OPTION-SPECIFIC POLICIES

GRADUATE PROGRAM HANDBOOK
The Graduate Program Handbook (http://www.stat.wisc.edu/sites/default/files/2016-17%20Complete%20PDF%20Handbook.pdf) is the repository for all of the program’s policies and requirements.

PRIOR COURSEWORK

Graduate Work from Other Institutions
With program approval, students are allowed to count no more than 9 credits of graduate coursework from other institutions toward the graduate degree credit and graduate coursework (50%) requirements. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

UW–Madison Undergraduate
With program approval, up to 6 statistics credits from a UW–Madison undergraduate degree at the 600 level or above are allowed to count toward minimum graduate degree credits. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

UW–Madison University Special
With program approval, up to 15 statistics credits completed at UW–Madison while a University Special student at the 300 level or above are allowed to count toward minimum graduate degree and graduate residence credit requirements. Of these credits, those at the 700 level or above may also count toward the minimum graduate coursework (50%) requirement.

Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

PROBATION
Three consecutive reviews in which a student fails to meet the minimum criteria for satisfactory progress will result in the student being dropped from the program. Contact the program for more information.

ADVISOR / COMMITTEE
Students are required to meet with their advisor near the beginning of each semester to discuss course selection and progress.

CREDITS PER TERM ALLOWED
15 credits

TIME CONSTRAINTS
The competency test must be passed within six semesters after entering the department.

OTHER
The M.S.–Data Science option is unique and does not allow students to accept assistantships, or to be concurrently enrolled in another university program or enrolled in courses outside of the MS–DS curriculum—see here (http://www.stat.wisc.edu/ms-degree-data-science-option-ms-ds) for more details.

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES
Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd) to build skills, thrive academically, and launch your career.

PEOPLE

Faculty: Professors J. Zhu (chair), Ane, Chappell, Chien, Keles, Larget, Loh, Newton, Shao, Y. Wang, Yandell, C. Zhang, Z. Zhang; Associate Professor Rohe; Assistant Professors Garcia Trillos, Kang, Patel, Raschka, Raskutti, M. Wang, A Zhang