

## MSDS Electives Offered in Fall 2026

All MSDS students must take 13 credits of electives to satisfy MSDS program requirements.

Course descriptions can be found in MSDS curriculum, included in the Requirements section of the [MSDS Graduate Guide](#).

**Statistics-taught Undergraduate electives** (numbered 300-599, may count a maximum of 3 credits towards MSDS program requirements)

- STAT 303 R for Statistics I (1 cr), STAT 304 R for Statistics II (1 cr), STAT 305 R for Statistics III (1 cr)
  - MSDS students must enroll in either LEC 002 or 004
  - Students who have no prior experience with R are strongly recommended to take these three courses
  - If you have previous coursework that is equivalent to one of these courses and would like permission to enroll in a later level, email me the syllabus for reevaluation
- STAT 403 Internship Course in Computer Sciences and Data Science (1 cr)
  - Eligible MSDS students may count up to 1 credit of STAT 403 toward degree requirements.
  - Visa-holding students **must** abide by all [CPT rules and regulations](#).
  - Review the [course website](#) for more information.
- STAT 349 LEC 002 Introduction to Time Series (3 cr)
- STAT 351 LEC 002 Introductory Nonparametric Statistics (3 cr)
- STAT 421 LEC 002 Applied Categorical Data Analysis (3 cr)
- STAT 436 LEC 002 Statistical Data Visualization (3 cr)
- STAT 441 LEC 002 Advanced Sports Analytics (3 cr)
  - Students who have completed STAT 479 Sports Analytics are **not** eligible to take STAT 441
- STAT 451 LEC 002 Introduction to Machine Learning and Statistical Pattern Classification (3 cr)
  - Students who have completed STAT 615 already are **not** eligible to take STAT 451
- STAT 453 LEC 002 Introduction to Deep Learning and Generative Models (3 cr)
- STAT 461 LEC 002 Financial Statistics (3 cr)

**As an MSDS student, it is exceptionally important that you pay attention to the sections that you are enrolling in.** The designated sections (noted by “Lecture 00x”) are for VISP & MSDS students. You should only enroll in the sections designated for VISP/MSDS students – the other sections are for Statistics undergraduate students.

We ask that all MSDS students enroll and waitlist **no more than 1 of the above electives**. If you have already taken an undergraduate elective (3 cr), you **cannot** take another. We do not have the capacity to accommodate additional undergraduate electives for MSDS students and you will not be allowed to count a second undergrad elective towards your degree requirements.

You may not take an additional (4th) credit of undergraduate electives other than STAT 303, 304, 305, or 403 (1 cr max. allowed).

**Statistics-taught 600+ Graduate electives** (must count at least 6 credits towards MSDS program requirements)

- STAT 609 LEC 001 DIS 311 or DIS 312 Mathematical Statistics I (3 cr)
  - Students who do not have a prior probability course **must** take this course
- STAT/B M I 641 LEC 001 Statistical Methods for Clinical Trials (3 cr)
- STAT 679 LEC 001 Interpretable Machine Learning (3 cr)
- STAT 679 LEC 004 Bayesian Statistics and Machine Learning (3 cr)
- STAT 701 Applied Time Series Analysis, Forecasting and Control I (3 cr)
- STAT 709 Mathematical Statistics I (4 cr)
  - MSDS students will not be able to access this course until after 10:00 AM on August 1
- STAT 780 Introduction to Quantum Data Science (3 cr)
- STAT 992 LEC 002 Statistical Consulting Practicum (2 cr)

Please note that research (STAT 990) and consulting (STAT 998) are **not** available to MSDS students.

All MSDS students must take at least 6 credits of Statistics-taught graduate electives; you may take more than two such courses to count towards your required 13 credits of electives. If you encounter an enrollment error because of a course prerequisite, please complete the form [at this link](#).

**Approved 500+ Graduate-level electives taught outside the Statistics department** (may take up to one course, maximum of 4 credits, toward MSDS program requirements)

Commonly approved outside elective courses in prior semesters have included: MATH 632; COMP SCI 524, 539, 540, 577, 642, 769, 771, 775; GEN BUS 760, among others.

Note that there are some courses, i.e. COMP SCI 760 and 761, that are **not** approved outside graduate elective courses for MSDS, as they are too similar to STAT 615.

If you choose to enroll in one graduate level (500+) elective course (up to 4 credits) taught outside of the Statistics department, it must be approved by the MSDS program chair. These include courses cross-listed with Statistics but taught by other departments. We very strongly encourage requests to pre-approve courses before your enrollment time.

To request review of an elective from outside of the MSDS curriculum, you should send the following information to [visp-msds@stat.wisc.edu](mailto:visp-msds@stat.wisc.edu):

- Course number
- Course title (including topic if applicable)
- Syllabus/course description (if available)
- A brief statement on why you would like to take this course and how it supplements the MSDS curriculum

MSDS coordinators cannot provide a review timeline, and cannot guarantee that a course will be approved. While courses are under review, you should enroll in appropriate courses for

MSDS to ensure that you are properly enrolled for degree requirements and visa purposes (if applicable).

Please feel free to contact MSDS program coordinators if you have questions by emailing [visp-msds@stat.wisc.edu](mailto:visp-msds@stat.wisc.edu).