

STATISTICS, DOCTORAL MINOR

ADMISSIONS

All graduate students must utilize the Graduate Student Portal in MyUW to add, change, or discontinue any doctoral minor. To apply to this minor, please log in to MyUW, click on Graduate Student Portal, and then click on Add/Change Programs. Then submit this form (https://uwmadison.co1.qualtrics.com/jfe/form/SV_74mxONn4o7fYVsp/) to have your program of study approved.

For admission for an Option A Minor in statistics, the candidate must have had at least one year of calculus, and an introductory knowledge of statistics that is satisfactory to the department. Any of the following (or an equivalent course) is sufficient for this purpose:

Code	Title	Credits
STAT 240	Data Science Modeling I	4
STAT 301	Introduction to Statistical Methods	3
STAT 302	Accelerated Introduction to Statistical Methods	3
STAT 324	Introductory Applied Statistics for Engineers	3
STAT 371	Introductory Applied Statistics for the Life Sciences	3
STAT/B M I 541	Introduction to Biostatistics	3
STAT/F&W ECOL/ HORT 571	Statistical Methods for Bioscience I	4

REQUIREMENTS

GENERAL REQUIREMENTS FOR AN OPTION-A MINOR IN STATISTICS FOR GRADUATES:

Please carefully read the requirements below. Requests for further information should be addressed to the Doctoral Minor Advisor in the Department of Statistics. **Note:** Candidates for an Option A Minor in Statistics must be aware of the Graduate School "Minors" policy (<https://grad.wisc.edu/documents/minors/>). For further information please visit this link: <https://stat.wisc.edu/statistics-doctoral-minor/>

The student should have a program of study **approved** by the Doctoral Minor Advisor in the Department of Statistics and the student's major advisor, **early in the student's graduate work**. The proposed program should be submitted to and approved by the minor program advisor in statistics **upon, or before, the completion of 6 credits**.

Please see Guide Admissions/How to Get In tab for specific details on how to declare.

Code	Title	Credits
<i>Students must take at least four courses totaling 12 or more credits from the following lists:</i>		

List 1 (at least one course):

STAT 303	R for Statistics I	1
STAT 304	R for Statistics II	1
STAT 305	R for Statistics III	1
STAT 327	Learning a Statistical Language	1
STAT 333	Applied Regression Analysis	3
STAT 340	Data Science Modeling II	4
STAT 349	Introduction to Time Series	3
STAT 351	Introductory Nonparametric Statistics	3
STAT 411	An Introduction to Sample Survey Theory and Methods	3
STAT 421	Applied Categorical Data Analysis	3
STAT/M E 424	Statistical Experimental Design	3
STAT 433	Data Science with R	3
STAT 443	Classification and Regression Trees	3
STAT 451	Introduction to Machine Learning and Statistical Pattern Classification	3
STAT 453	Introduction to Deep Learning and Generative Models	3
STAT 456	Applied Multivariate Analysis	3
STAT 461	Financial Statistics	3
STAT/COMP SCI 471	Introduction to Computational Statistics	3
STAT 479	Special Topics in Statistics	1-3
STAT/B M I 542	Introduction to Clinical Trials I	3
STAT/F&W ECOL/ HORT 572	Statistical Methods for Bioscience II	4
STAT 575	Statistical Methods for Spatial Data	3
STAT/B M I 641	Statistical Methods for Clinical Trials	3
STAT/B M I 642	Statistical Methods for Epidemiology	3
STAT 679	Special Topics in Statistics	1-3
STAT 732	Large Sample Theory of Statistical Inference	3
STAT/B M I 741	Survival Analysis Theory and Methods	3
STAT 760	Multivariate Analysis I	3
STAT 761	Decision Trees for Multivariate Analysis	3
STAT/B M I 768	Statistical Methods for Medical Image Analysis	3
STAT 771	Statistical Computing	3
STAT/ECON/ GEN BUS 775	Introduction to Bayesian Decision and Control I	3
STAT 801	Advanced Financial Statistics	3
STAT/MATH 803	Experimental Design I	3
STAT 809	Non Parametric Statistics	3
STAT 811	Sample Survey Theory and Method	3
STAT 834	Empirical Processes and Semiparametric Inference	1-3
STAT 840	Statistical Model Building and Learning	3

STAT 841	Nonparametric Statistics and Machine Learning Methods	3	Peter Chien (https://stat.wisc.edu/staff/chien-peter/), Professor
STAT 849	Theory and Application of Regression and Analysis of Variance I	3	Jessi Cisewski-Kehe (https://stat.wisc.edu/staff/cisewski-kehe-jessi/), Assistant Professor
STAT 850	Theory and Application of Regression and Analysis of Variance II	3	Deshpande, Sameer (https://skdeshpande91.github.io/), Assistant Professor
STAT 860	Estimation of Functions from Data	3	Nicolas Garcia Trillos (https://stat.wisc.edu/staff/trillos-nicolas-garcia/), Assistant Professor
STAT/COMP SCI/ E C E 861	Theoretical Foundations of Machine Learning	3	Yinqiu He (https://stat.wisc.edu/staff/he-yinqiu/), Assistant Professor
STAT/B M I 877	Statistical Methods for Molecular Biology	3	Hyunseung Kang (https://stat.wisc.edu/staff/kang-hyunseung/), Associate Professor
STAT 992	Seminar	1-3	Sunduz Keles (https://stat.wisc.edu/staff/keles-sunduz/), Professor
List 2 (at most one course):			
STAT/MATH 309	Introduction to Probability and Mathematical Statistics I	3	Bret Larget (https://stat.wisc.edu/staff/larget-bret/), Professor
STAT 311	Introduction to Theory and Methods of Mathematical Statistics I	3	Keith Levin (https://stat.wisc.edu/staff/levin-keith/), Assistant Professor
STAT 609	Mathematical Statistics I	3	Wei-Yin Loh (https://stat.wisc.edu/staff/loh-wei-yin/), Professor
STAT/MATH 709	Mathematical Statistics	4	Michael Newton (https://stat.wisc.edu/staff/newton-michael/), Professor
List 3 (at most one course):			
STAT/MATH 310	Introduction to Probability and Mathematical Statistics II	3	Vivak Patel (https://stat.wisc.edu/staff/patel-vivak/), Assistant Professor
STAT 312	Introduction to Theory and Methods of Mathematical Statistics II	3	Alejandra Quintos (https://stat.wisc.edu/staff/quintos-alejandra/), Assistant Professor
STAT 610	Introduction to Statistical Inference	4	Garvesh Raskutti (https://stat.wisc.edu/staff/raskutti-garvesh/), Associate Professor
STAT/MATH 710	Mathematical Statistics	4	Karl Rohe (https://stat.wisc.edu/staff/rohe-karl/), Professor
List 4 (at most one course):			
STAT/MATH 431	Introduction to the Theory of Probability	3	Kris Sankaran (https://stat.wisc.edu/staff/sankaran-kris/), Assistant Professor
STAT/COMP SCI/ MATH 475	Introduction to Combinatorics	3	Jun Shao (https://stat.wisc.edu/staff/shao-jun/), Professor
STAT/COMP SCI/ I S Y E/MATH 525	Linear Optimization	3	Miaoyan Wang (https://stat.wisc.edu/staff/wang-miaoyan/), Assistant Professor
STAT/I S Y E/MATH/ OTM 632	Introduction to Stochastic Processes	3	Yahzen Wang (https://stat.wisc.edu/staff/wang-yazhen/) (chair), Professor
STAT/COMP SCI/ I S Y E/MATH 726	Nonlinear Optimization I	3	Brian Yandell (https://stat.wisc.edu/staff/yandell-brian/), Professor
STAT/MATH 733	Theory of Probability I	3	Chunming Zhang (https://stat.wisc.edu/staff/zhang-chunming/), Professor
STAT/MATH 833	Topics in the Theory of Probability	3	Yiqiao Zhong (https://stat.wisc.edu/staff/zhong-yiqiao/), Assistant Professor
<i>OR another course approved by the Ph.D. minor advisor.</i>			
The student must achieve a 3.00 GPA in courses used to satisfy the minor requirement.			
Jun Zhu (https://stat.wisc.edu/staff/zhu-jun/), Professor			

PEOPLE

Faculty:

Cecile Ane (<https://stat.wisc.edu/staff/ane-cecile/>), Professor

Joshua Cape (<https://stat.wisc.edu/staff/cape-joshua/>), Assistant Professor

Richard Chappell (<https://stat.wisc.edu/staff/chappell-rick/>), Professor