

STATISTICS, DOCTORAL MINOR

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
STAT 849	Theory and Application of Regression and Analysis of Variance I	3
STAT 850	Theory and Application of Regression and Analysis of Variance II	3
STAT 860	Estimation of Functions from Data	3
STAT/COMP SCI/ E C E 861	Theoretical Foundations of Machine Learning	3
STAT/B M I 877	Statistical Methods for Molecular Biology	3
STAT 992	Seminar	1-3
List 2 (at most one course):		
STAT/MATH 309	Introduction to Probability and Mathematical Statistics I	3
STAT 311	Introduction to Theory and Methods of Mathematical Statistics I	3
STAT 609	Mathematical Statistics I	3
STAT/MATH 709	Mathematical Statistics	4
List 3 (at most one course):		
STAT/MATH 310	Introduction to Probability and Mathematical Statistics II	3
STAT 312	Introduction to Theory and Methods of Mathematical Statistics II	3
STAT 610	Introduction to Statistical Inference	4

STAT/MATH 710	Mathematical Statistics	4
List 4 (at most one course):		
STAT/MATH 431	Introduction to the Theory of Probability	3
STAT/COMP SCI/ MATH 475	Introduction to Combinatorics	3
STAT/COMP SCI/ ISY E/MATH 525	Linear Optimization	3
STAT/ISY E/MATH/ OTM 632	Introduction to Stochastic Processes	3
STAT/COMP SCI/ ISY E/MATH 726	Nonlinear Optimization I	3
STAT/MATH 733	Theory of Probability I	3
STAT/MATH 833	Topics in the Theory of Probability	3
<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.