Ph.D. Program in Statistics

■ Program Overview

Ph.D in Statistics is provided by the Department of Statistics under the School of Mathematical Sciences. Candidates with a master's degree are expected to graduate in three years and candidates with a bachelor's degree in five years. The objective of this program is to extend the frontiers of research in various fields of statistics, including but not limited to Biological Information and Biostatistics, Financial Statistics and Measurement, High-Dimensional Data Statistical Analysis, Mathematical Statistics and Applied Probability, Statistical Methods for Quality Control and Management as well as Statistic Analysis in Systems Science.

■ Main Courses

For candidates holding a master's degree

Course	Requirement
Statistical Methods for Clinical Medicine	Optional
Insurance Computing	Optional
Econometrics	Optional
Digital Image Processing	Optional
Advanced Statistics	Optional
Modern Bayesian Statistics	Optional
Nonlinear Time Series Analysis	Optional
High Dimensional Statistical Inference	Optional
Sampling Theory and Methods	Optional
Nonparametric Statistical Analysis	Optional
Complex Network and Related Topics	Optional
Stochastic Analysis	Optional
Theory of Stochastic Processes	Optional
Financial Mathematics	Optional
Selected Topics in Modern Statistics (1)	Optional
Selected Topics in Modern Statistics (2)	Optional
Seminar	Compulsory

For candidates holding a bachelor's degree

Course	Requirement
Advanced Mathematical Statistics	Compulsory
Stochastic Process	Compulsory
Scientific Computing	Compulsory
Measure and Probability Theories	Compulsory
Statistical Inference and Decision	Optional
Survival Analysis	Optional
Bayesian Statistics	Optional
Statistical Computing	Optional
Methods for Applied Mathematics	Optional
Complex Network	Optional
Multivariate Statistic Analysis	Optional
Nonparametric Statistics	Optional
Time Series Analysis	Optional
Sampling Survey	Optional
Design of Experiments	Optional
Advanced Computing Methods	Optional
Statistical Methods for Clinical Medicine	Optional
Insurance Computing	Optional
Econometrics	Optional
Digital Image Processing	Optional
Advanced Statistics	Optional
Modern Bayesian Statistics	Optional
Nonlinear Time Series Analysis	Optional
High Dimensional Statistical Inference	Optional
Sampling Theory and Methods	Optional
Nonparametric Statistical Analysis	Optional
Complex Network and Related Topics	Optional
Stochastic Analysis	Optional
Theory of Stochastic Processes	Optional
Financial Mathematics	Optional
Selected Topics in Modern Statistics (1)	Optional
Selected Topics in Modern Statistics (2)	Optional
Seminar	Compulsory