

Major in Statistics

The Department of Statistics and Applied Probability in NUS offers an undergraduate major in Statistics. Honours students in this major have the option to specialize either in Data Science or in Finance and Business Statistics.

A brief outline of the modules offered by the department for this major is as follows.

Level 1000

Introduction to Statistics provides students with the basic concepts in statistics.

Level 2000

Students at the second year will learn programming languages, for example the popular software package R that statisticians use, by taking **Computer Aided Data Analysis**. They will also take **Probability** and **Mathematical Statistics**, which provide a foundation for higher-level modules.

Level 3000 and 4000

Students at their third and honours year will take modules on important statistical techniques like **Simulation** and **Regression Analysis**, and also modules that have important applications:

1. Finance and business statistics: **Applied Time Series Analysis, Actuarial Statistics, Statistical Methods for Finance.**
2. Data science: **Multivariate Statistical Analysis, Data Mining, Bayesian Statistics, High-dimensional Statistical Analysis, Optimization for Large-Scale Data-Driven Inference**
3. Medical and public health data: **Demographic Methods, Introduction to Survival Analysis, Statistical Method in Epidemiology, Survey Methodology**
4. Industrial statistics: **Design and Analysis of Experiments, Statistical Quality Control.**

The modules **Categorical Data Analysis, Computer Intensive Statistical Methods, Nonparametric Statistics** teach students statistical tools to handle specific types of data.

Students will also be matched, based on their interest, to a supervisor to do a final year project, if they progress to the honours year.



DATA SCIENCE AND ANALYTICS

"I develop machine learning models, enabling computers to analyse consumer behavioural patterns from large-scale data. The models make personalised product recommendations, enhancing the customer experience and promoting sales."

TAY Yu Xuan
Data Scientist
Lazada Group
B.Sc. (Hons) in Statistics, specialisation in
Finance and Business Statistics, Minor in
Financial Mathematics (2014)

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