



HANYANG UNIVERSITY

2019 HISS Syllabus (Introduction to Econometrics)

Professor: **Jong-Min Kim**
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Home Univ.: University of Minnesota at Morris
Dept.: Statistics

Description: First, this course will cover the statistical concepts for econometric analysis such as single (multiple) regression analysis, ordinary least squares (OLS), Logit and Probit Models and violations of standard assumptions such as heteroskedasticity and multicollinearity. Second, this course will introduce the basic models for time series analysis such as stationary and nonstationary time series, analysis of trends using regression methods, ARIMA, model specification, transformations, parameter estimation, model diagnostics, forecasting, Seasonal ARIMA time series models, and GARCH models.

Objective: The objective of this course is to introduce basic concepts and theory of econometric analysis with practical applications, mainly stock financial data.
Textbook: Damodar Gujarati, Econometrics by Example, 2nd Edition, Palgrave Macmillan (2014).

Preparations: **Pre-knowledge:** Basic College Algebra.
Materials: Regular Calculator needed.

Credits	3 Credits	Contact Hours	45 Hours
Schedule:	Week 1	Chapter 1: The linear regression model: an overview Chapter 2: Functional forms of regression models	

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	Chapter 3: Qualitative explanatory variables regression models
	Chapter 4: Regression diagnostic I: multicollinearity
Week 2	Chapter 5: Regression diagnostic II: heteroscedasticity
	Chapter 6: Regression diagnostic III: autocorrelation
	Chapter 7: Regression diagnostic IV: model specification errors
	Chapter 8: The logit and probit models
	Chapter 10: Ordinal regression models
Week 3	Chapter 12: Modeling count data: the Poisson and negative binomial regression models
	Chapter 17: Panel data regression models
	Chapter 20: Beyond OLS: quantile regression
Week 4	Chapter 13: Stationary and nonstationary time series
	Chapter 14: Cointegration and error correction models
	Chapter 15: Asset price volatility: the ARCH and GARCH models
	Chapter 16: Economics forecasting

Evaluation(%)	Midterm	Final	Attendance	Assignments	Participation	Etc.
	25	50	10	5	10	