Syllabus of Fall Semester, 2017

Course Title	REGRESSION ANALYSIS (II)	Course Code		ST22405	Section		032
Department	Statistics	Level		3	Credit - Theory - Practice		3.0 - 3.0 - 0.0
Class Hours & Classroom	Mon. 10:30(75) 313-105,Wed. 10:30(75) 313-105						
Lecturer	KIM,CHOONG-RAK	Office			Office Hours		13:00 - 14:00 Mon., Wed.
		Telephone			E-mail		
Methodology of Instruction							
Evaluation and Grading	exams (mid 40%, final 40%), 2 projects (10% each) * Students with disabilities can request an extension of the exam hour, and they can take exams by getting writing assistance or by using a computer.						
Prerequisites							
Course Objectives	Based on the basic concepts and methods done in Regression Analysis (I), we extend the regression model to polynomial regression, Box-Cox transformation model, robust regression, biased estimation, generalized linear regression, nonlinear regression, nonparametric regression, and models for censored data.						
Course Description	- extension of linear regression (dummy variable, polynomial regression, robust regression) - biased estimation (ridge regression, lasso, Stein shrinkage) - generalized linear models (logistic regression, log-linear models) - nonlinear regression (Gauss-Newton) - nonparametric regression (kernel estimation, series estimation, spline) - regression for censored data (survival function, Cox regression) * Students with disabilities can negotiate with the Disabled Student's Academic Support Center regarding course materials and assignments.						

Relationship between Courses and Core Competencies

8 Core Competencies of PNU							

Core Competencies Based on Courses and Educational Methods

Core Competencies of Department		Educational Methods
2	Ability of data analysis and statistical testing for the given hypothesis	
4	Ability of applying statistics to other academic fields	
5	Ability of contribution to solving statistical problems as a member of team	
7	Ability of understanding the effects of statistics on the national affairs and environments	

Textbooks and References

Required Textbooks	- text : Regression Analysis (2nd ed.) - authors : Choongrak Kim and Gunseog Kang - publisher : Kyowoosa
References	Applied Linear Statistical Models by Neter, Wasserman, and Kutner (Irwin publisher)

	Weekly Schedule of Classes	
Week No.	Course Material	Assignments and Other Notes
Week 1	[Orientation and Education on Academic Misbehavior(e.g. Cheating, Plagiarism) and Safety Education on Experiment and Practice] dummy variables	
Week 2	polynomial regression	
Week 3	Box-Cox transformation model	
Week 4	robust regression	
Week 5	ridge regression	
Week 6	lasso	
Week 7	Stein shrinkage estimator	
Week 8	midterm exam	project I
Week 9	generalized linear models	
Week10	logistic regression	
Week11	log-linear models	
Week12	nonlinear regression	
Week13	kernel estimation	
Week14	spline	
Week15	Cox regression for censored data	
Week16	final exam	project II
Attachment		