

FE539 Computational Finance

Fall 2016

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Grading:

Project I, II: 80%

- Proposal (20%),

- Final Presentation (60%)

Participation: 20%

Course description:

FE539 aims to offer computing skills that are essentially needed in the financial engineering. This course deals with Database Concept, Database Programming and Neural Network Algorithm for financial engineering. Students will learn the fundamentals of computing finance through several case studies and project-based study.

Important notice:

- The instructors may change the grading policy if needed.

Course schedule:

	Date	Topic	Note
1	9/1	Course Overview – objectives & schedule Introduction to Database	Project I Teaming
2	9/8	Relational Data Model	
3	9/15	9/14 ~ 9/16 추석	No class
4	9/22	Database design	Project I Proposal
5	9/29	Introduction to SQL I	
6	10/6	Introduction to SQL II : Join and Index	
7	10/13	Advanced SQL: Functions and Procedures	
8	10/20	Optimization and Advanced topics	
9	10/27	Project I: Presentation	
10	11/3	What is the Neural Network?	Project II Teaming
11	11/10	Feedforward Multilayer Perception	
12	11/17	Universal Approximation Property and Convergence	Project II Proposal
13	11/24	Backward Propagation Algorithm and Convergence	
14	12/1	Applications of Neural Network to Financial Market	
15	12/8	Mathematical Analysis; - Stock Market Forecasting - Pricing & Hedging Derivative Securities	
16	12/15	Mathematical Analysis; - Constrained Portfolio Selection Problem. - Forecasting GDP Growth. - Forecasting Inflation.	
17	10/22	Project II: Presentation	

* This schedule is subject to change.