

Department of Finance

Finance

I. Introduction

The Department of Finance is one of the first five departments of SUSTC founded in 2011. Our department aims to build a strong, domestically and internationally recognized finance discipline. Our department adheres to the SUSTC's motto of "Research, Innovation and Entrepreneurship" in research. We strive to contribute our research to the national strategic plans and the regional development in the Pearl River Delta and Shenzhen. The research projects undertaken by the department in financial asset pricing theory and empirical analysis, Chinese finance theory and practice, E-finance trades and mechanism, risk measurement and monitoring in E-finance, and quantitative finance are all driven by the important issues in today's economy. Our department is committed to educating students with the most contemporary financial knowledge, critical thinking, entrepreneurship, and global vision so that they are ready to solve practical and challenging problems in China's finance and economy.

The Department of Finance has seven full-time academic staff, including three professors and four assistant professors. Among them, one is Changjiang Scholar and one is Shenzhen Leading Talent. Six of the academic members hold doctoral degrees from highly reputable overseas universities and most of them have experience in financial industries or financial supervision experience in regulatory institutions.

Our faculty has published over 50 papers through 2015. "The financial crisis and government bailout" authored by Prof. He Jia was published in the 65th Anniversary of "China Finance." The latest research of Mrs. Chen Kun, an assistant professor, entitled "Design Theory Securities Market Surveillance System" was published in the "Journal of Management Information Systems." Besides these, our department has

regular academic seminars, featuring top talent speakers from well-known institutions and financial companies. A well-equipped finance laboratory is ready for students to use, which is currently equipped with virtual exchanges, high-frequency databases, financial modeling dynamic simulation systems, a laboratory management platform, a large-screen management system, a multi-screen GTA integrated financial information system, MATLAB, etc. Our facilities are comprised of high performance workstations, projection systems, sound systems, switches, line counters, cabinets, etc., and our hardware facilities can accommodate up to 40 people for teaching and training.

In 2015, our department graduated its first cohort. Some of our students have begun their careers in the financial industry sector, with institutions such as Minsen Capital Management. Some of them are pursuing higher degree in Finance, such as PhDs in schools such as The University of Pittsburgh.

II. Objectives

The Finance program is committed to educating students with a solid foundation of financial and economics knowledge, skills, methodology and theory. The program also aims to train students to be professional in the most contemporary forms of finance, which prepares them to pursue challenging careers in the financial sector as investment bankers, financial engineers, hedge fund managers, policy advisors for China's financial reforms and innovative entrepreneurs in the finance industry. This program not only provides a strong foundation for critical thinking, entrepreneurship, and global vision, but also develops innovative and visionary talents to solve the practical problems of China's financial reforms.

III. Period of Study and Degree Requirement

Time length: 4 years

Degree conferred: Bachelor of Economics

The minimum credit requirement for graduation: 139 credits

IV. Discipline

Economics

V. Main Courses

Major Foundational Courses: Probability and Statistics, Microeconomics, Macroeconomics, Financial Accounting, Corporate Finance

Major Core Courses: Special Topics in Finance and Entrepreneurship (I&II), Financial Data Analysis and Data Mining, Financial Investments, Econometrics, Options, Futures and Other Financial Derivatives, Empirical Methods in Finance

VI. Practice-Based Courses

Internship Programs : Our internship program provides students with professional and real-life business experience during their university years. We encourage students to get first-hand knowledge of how corporations operate on a day-to-day basis by recognizing their hard-work with credits towards graduation and by providing internship subsidies to cover their daily expenses. On top of this, we have established some connections with the business community for internship opportunities with corporations such as the Bank of China.

VII. Course Structure and Credit Requirements

General Education (GE) Required Courses : 58.5 credits

General Education (GE) Elective Courses: 10 credits

Major Foundational Courses: 27 credits

Major Core Courses: 15 credits

Major Elective Courses: 18.5 credits

Research Projects and Undergraduate Thesis : 10 credits

The minimum credit requirement for graduation: 139credits

VIII. Course Arrangement

Table 1: Major Required Course (Foundational and Core Courses)

	Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	course to take the	language Advised term	Instruction	Prerequisite*	Dept.
Major Foundational Courses	MA101	Mathematical Analysis(I)	6		6	Fall	1/F				MATH
	FIN201	Microeconomics	3		3	Fall	1/F	C/E		NA	FIN
	MA102	Mathematical Analysis(II)	6		6	Spr.	1/Spr.				MATH
	FIN204	Macroeconomics	3		3	Spr.	1/Spr.	C/E		NA	FIN
	FIN203	Financial Accounting	3		3	Fall	2/F	C/E		NA	FIN
	MA212	Probability and Statistics	3		3	Spr.	2/Spr.				MATH
	FIN206	Corporate Finance	3		3	Spr.	2/Spr.	C/E		Financial Accounting/ Microeconomics	FIN
	Total		27		27						
Major Core Courses	FIN205	Special Topics in Finance and Entrepreneurship I	1.5	0.5	2	Fall	2/F	C			FIN
	FIN202	Special Topics in Finance and Entrepreneurship II	1.5	0.5	2	Spr.	2/Spr.	C			FIN
	FIN301	Financial Investments	3		3	Fall	3/ F	C/E		Microeconomics/ Macroeconomics/ Probability and Statistics	FIN
	FIN303	Econometrics**	3		3	Fall	3/ F	C/E		Microeconomics/ Macroeconomics/ Probability and Statistics	FIN
	FIN305	Options, Futures and Financial Derivatives	3		3	Spr.	3/ Spr.	C/E		Mathematical Analysis(I)/ Linear algebra (I&II)	FIN
	FIN302	Empirical Methods in Finance	3		3	Spr.	3/Spr.	C/E		Econometrics/ Options, Futures and Financial Derivatives	FIN
	Total		15	2	17						
FIN480		Research Projects ***	2	2	4	F/	After	C/			FIN

					Spr./ Smr.	the first term	E		
FIN490	Undergraduate Thesis	8	8	16	F /Spr.	4/Fall& Spr.	C/ E		FIN
Total		56	12	68					
<p>*Note:MA101B, MA102B, MA213-16 can replace the credits of MA101, MA102.</p> <p>** Note: The credits FIN301 Econometrics can replace the credits of FIN303 Econometrics partly.</p> <p>*** Note: Students may choose to carry out the Projects of Science and Technology Innovation in any year after the first year.</p> <p>The two credits requirements ask for 64 hours in total.</p>									

Table 2: Major Elective Courses

Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	course to take the Advised term	Instruction language	Prerequisite*	Dept.
GE106	Computer System Design and Applications	3	1	4	Spr.	2/Spr.			
MA104	Linear algebra II	4		4	Spr.	1/Spr.			MATH
MA205	Discrete Mathematics	4		4	Fall	2/Fall			MATH
MA201b	Ordinary Differential Equations	4		4	Fall	2/ Fall			MATH
FIN213	Financial Market, Institutions and Regulations	3		3	Fall	2/ Fall			FIN
FIN209	Entrepreneurial Finance and Innovation I	3		3	Fall	2/ Fall	C/E	NA	FIN
FIN210	Economics of Money and Banking	3		3	Spr.	2/Spr.	C/E	NA	FIN
MA208	Applied Stochastic Processes	4		4	Spr.	2/Spr.			MATH
FIN307	Database Management Systems and Financial Applications	3	1	4	Fall	3/Fall	C/E	Computer System Design and Applications	FIN
MA301	Partial Differential Equations	4		4	Fall	3/Fall			MATH
FIN311 **	Artificial Intelligence and Financial Applications	3	1	4	Fall	3/Fall	C/E	Computer programming design principle/ Data structures and algorithm analysis	FIN
FMA303	Investment	3		3	Fall	3/Fall			MATH
FIN411	International Finance	2		2	Fall	3/Fall	C/E		FIN
FIN208	Financial data analysis and Data Mining	3	1	4	Spr.	3/Spr.	C/E	Probability and Statistics	FIN
MA306	Foundations to Stochastic Analysis	4		4	Spr.	3/Spr.			MATH
FIN304 **	Financial Time Series	3		3	Spr.	3/Spr.	C/E	Econometrics	FIN
MA304	Multivariate Statistical Analysis	4		4	Spr.	3/Spr.			MATH
FIN306	Fixed Income: Models and Applications	2		2	Spr.	3/Spr.	C/E	Options, Futures and Financial Derivatives	FIN
FIN308	Financial Economics	3		3	Spr.	3/Spr.	C/E	Corporate Finance	FIN
MA308	Statistical Computation and Software	3	1	4	Spr.	3/Spr.	C/E		MATH
FIN407	Investment Banking	3		3	Spr.	3/Spr.	C/E	Corporate Finance	FIN
FIN401	Computational Finance	3		3	Fall	4/Fall	C/E	Options, Futures	FIN

								and Financial Derivatives	
FIN403	Cases in Financial Innovations	3	1	4	Fall	4/Fall	C/E	Options, Futures and Financial Derivatives	FIN
FIN310	China Economics and Finance	2	1	3	Fall	4/Fall	C/E	Financial Economics	FIN
FIN409	Financial Modeling and Analysis	3	1	4	Fall	4/Fall	C/E	Mathematical Analysis(I&II)/ Linear algebra (I&II)/ Probability and Statistics	FIN
FIN413	Quantitative Investment Analysis	3	1	4	Fall	4/Fall	C/E	Econometrics/ Financial Investments	FIN
FIN415	Internet Finance Topics /Quantitative Finance Topics /Contemporary Financial Topics of China	3		3	Fall	4/Fall	C/E	Financial data analysis and Data Mining/ Econometrics/ China Economics and Finance	FIN
FIN417	Corporate Finance Case analysis	3	1	4	Fall	4/Fall	C/E	Financial Market, Institutions and Regulations/ Fixed Income: Models and Applications/ Financial Economics/ Economics of Money and Banking/ Empirical Methods in Finance/ Database Management Systems and Financial Applications/ Financial Time Series	FIN
FET303	Financial Risk Management	3		3	Fall	4/F		Probability and Statistics/ Corporate	FIN

								Finance	
FIN402	Big Data Analysis	2	1	3	Smr.	3/Smr.	C/E	Financial data analysis and Data Mining	FIN
FINS301	Behavioural Finance	1		1	Smr.	3/Smr.	C/E		FIN
FETS301	Internship***	3	3	6	Smr.	3/Smr.	C/E		FIN
Total		93	14	107					

Note: Courses above should be study at least 18.5 credits for every student.

*Note: Prerequisite includes the requisite of the prerequisite. Course and its Prerequisite can be study at the same time, but the prerequisite cannot be learned later than the course.

**Note: The credits of CS303B Artificial intelligence can replace the credits of FIN309 Artificial Intelligence and Financial Applications partly. The credits of MA309 Time series analysis can replace the credits of FIN304 Financial Time Series partly.

***Note: Students should carry out the Intership in the summer term after the third year. The three credits requirements ask for 96 hours in total.

Table 3: Overview of Practice-Based Courses

Course Code	Course Name	Credits	Lab Credits	Hours/week	Terms	course to take the Advised term	Instruction language	Prerequisite	Dept.
GE106	Computer System Design and Applications	3	1	4	Spr.	2/Spr.			
FIN205	Special Topics in Finance and Entrepreneurship I	1.5	0.5	2	Fall	2/Fall	C	NA	FIN
FIN202	Special Topics in Finance and Entrepreneurship II	1.5	0.5	2	Spr.	2/ Spr.	C	Special Topics in Finance and Entrepreneurship I	FIN
FIN208	Financial data analysis and Data Mining	3	1	4	Spr.	3/Spr.	C/E	Probability and Statistics	FIN
FIN307	Database Management Systems and Financial Applications	3	1	4	Fall	3/Fall	C/E	Computer System Design and Applications	FIN
MA308	Statistical Computation and Software	3	1	4	Spr.	3/Spr.			MATH
FIN302	Empirical Methods in Finance	3	1	4	Spr.	3/Spr.	C/E	Econometrics/ Options, Futures and Financial Derivatives	FIN
FIN403	Cases in Financial Innovations	3	1	4	Fall	4/Fall	C/E	Options, Futures and Financial Derivatives	FIN
FIN405	China Economics and Finance	2	1	3	Fall	4/Fall	C/E	Financial Economics	FIN
FIN409	Financial Modeling and Analysis	3	1	4	Fall	4/Fall	C/E	Mathematical Analysis(I&II)/ Linear algebra(I&II)/ Probability and Statistics	FIN
FIN417	Corporate Finance Case analysis	3	1	4	Fall	4/Fall	C	Financial Market, Institutions and Regulations/ Fixed Income: Models and	FIN

								Applications/ Financial Economics/ Economics of M oney and Banki ng/ Empirical Methods in Finance/ Database Management Systems and Financial Applications/ Financial Time Series	
FIN402	Big Data Analysis	2	1	3	Spr.	4/Spr.	C/E		FIN
FIN480	Projects of Science and Technology Innovation	2	2	4	F/Spr./ Smr.	After first term	C/E		FIN
FETS301	Internship	3	3	6	Smr.	3/Smr	C/E		FIN
FIN490	Thesis	8	8	16	Fall /Spr.	4/Fall &Spr.	C/E		FIN
Total		50	26	76					

Table 4: Overview of Course Hours and Credits

	Total Course Hours	Total Credits	The Minimum Credit Requirement
General Education (GE) Required Courses	1040	60.5	58.5
General Education (GE) Elective Courses (exclude finance courses)	3144	182.5	10
Major Foundational Courses	496	31	27
Major Core Courses	336	15	15
Major Elective Courses	1712	94	18.5
Research Projects, and Undergraduate Thesis/Projects	320	10	10
Total	7048	391	139