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English Taught Program-Master Degree Program of Finance

What is the program about?

The program aims to prepare students who are interested in the fields of capital market, monetary finance, international finance, financial theory and financial engineering, financial system and enterprise growth, theory and practice of investment. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as capital market, monetary finance, international finance, financial theory and financial engineering, financial system and enterprise growth, theory and practice of investment. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- Intermediate and Advanced Microeconomics

This course emphasizes the applications of mathematical models to study economic issues in the micro scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

- Intermediate and Advanced Econometrics

This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

- Institutional Economics

Based on the needs of understanding the real world's economy, this course focuses on the theory and empirical research on Institutional Economics. The content includes definition of institution, persistence of institution, property rights, transaction cost and firm theory, institutional change, path dependence, formal and informal institution, contract theory (including complete and incomplete contracts), institutional and evolutionary economics, and china institutional reform, the institutionalizable of people's inward world, the co-evolution of both gene and culture, and the economic performance of institutions, etc.

- Financial Economics – Asset Pricing

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- Academic English

This graduate course imparts students with skills necessary to write an English thesis or journal article. Particularly, students will be introduced to academic writing skills such as appropriate sentence structure and flow of thoughts using strong linkages to clearly present ideas. Students will not only learn skills to organize ideas through mind maps and flow charts, but also know how to search for relevant literature in their field. They will learn how to write abstracts, introductions as well as conclusions with the aim of capturing the key information from the literature. They will also be taught how to properly cite articles as well as create reference lists. Students will also have to do projects which require public speaking in English.

- Frontier Lectures in Economics

This course focuses on the frontiers of economic research topics. Topics include the latest academic papers in the fields of Macroeconomics, Microeconomics, Econometrics and Finance. The teacher will instruct the students to search, read and present academic research papers. Courses are provided three ways: lecturing from teacher and invited speakers, presentation of students. Evaluation for the course will be based on the attendances and the presentation of selected academic papers.

- New Political Economy

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

- Methodology of Economics

Based on three levels, this course focuses on economic philosophy, the assumption of economics and current research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

- Game Theory

This course focuses on game theory and basic game models, as well as their application in specific economic problems. Main content include the general representation, definition of strategies, and equilibrium analysis of four basic game models, which are complete information static game, complete information dynamic game, incomplete information static game, and incomplete information dynamic game. The application of those models in the fields of macroeconomics, microeconomics, labor economics, and international economics is also discussed in detail.

- Labour Economics

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- Experimental Economics

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- Empirical Strategy

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID

method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- Energy economics
- Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.
- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

International Admission Office
Department of International Affairs
Email: admission@sdu.edu.cn
Tel: +86-(0)531 88364854
Website: www.istudy.sdu.edu.cn

Center for Economic Research
Email: cer@sdu.edu.cn
Tel: +86-531-88364128, +86-531-88363677
website: <http://www.cer.sdu.edu.cn/>

English Taught Program-Master Program of International Trade

What is the program about?

This program is designed to meet the needs of those who wish to understand China's economy. The courses are intended to equip students with the main tools of the professional economist, whether they intend to work in government, international organizations or business. The structure of the program is flexible and allows students to specialize to some extent in either economic theory or China's economy. With a series of compulsory core courses on economic theory, the program combines lectures, seminars and tutorial supervision. The program provides an introduction to the study of Chinese economy, drawing on a range of aspects including industrial structure, financial market, trade policy, etc. The course not only prepares students for research work in an academic discipline but also is suitable for those with career interests related to China.

How long does the program last?

The three-year master's program will be fully taught in English. Upon the completion of the program, graduates will earn a Master's Degree in Finance, International Trade and World Economy.

Who is eligible to apply?

Applicants must be Non-Chinese citizens in good health, at the age of 18 or above, and possess a valid and private passport;

1. Applicants must have bachelor's degree or above;

·Applicants who have not yet graduated can obtain a pre-graduation letter from their current educational institution stating their expected date of graduation. If accepted, applicant is required to provide the original graduation certificate upon registration. Otherwise, the acceptance qualification will be cancelled.

2. Language Requirement:

·Applicants with English as native language are exempted from English language certificate.

·Applicants from non-English speaking countries must provide IELTS (6.5 or above), new TOEFL (90 points or above) or other comparable certification of English proficiency.

·Applicants who have obtained their highest degree with English as the medium of instruction are exempted from providing language proficiency certification, but proof indicating the language medium is required.

Application Checklist:

- ✧ Application Form
- ✧ Photo Page of Passport
- ✧ Bachelor's Degree / Pre-Graduation Letter
- ✧ Official University/College Transcript
- ✧ Two Letters of Recommendation (from prof/associate prof. or enterprise leaders)
- ✧ Personal Statement
- ✧ Proof of Language Proficiency (if applicable)
- ✧ Proof of Employment (if applicable)

✧ Other Attachments (if needed)

How to Graduate?

Credit Requirements

The total credits required for the master program of international trade and world economy are 30 credits and master program of finance are 32 credits.

- (1) Course Requirements: Total 26-28 Credits with 11-12 courses in the first 3 semesters.
- (2) Advanced Lecture: 2 Credits
- (3) Seminar: 1 Credit
- (4) Social Practice: 1 Credit

See Curriculum below:

Content			Credits	
Courses	Compulsory Courses	Specialized Courses	20	26-28
		China Survey		
		Chinese		
	Elective Courses	6-8		
Advanced Lectures			2	
Seminar			1	
Social Practice			1	

Master's Thesis

In the third year, students must finish their master's thesis of no less than 20,000 words. The thesis should be submitted on time and defended in the sixth term (in mid-May).

Program Courses

Core Courses

Intermediate Microeconomics

This course focuses on the core part of the microeconomics with the emphasis on 1) the development of analytical tools and the understanding of how the theories are constructed and 2) the working and failure cases of the market system. Microeconomic theories cannot be effectively understood without mathematics. Be familiar with calculus and optimization methods. Topics include choice theory, theory of the firm, introduction to general equilibrium and welfare economics, and theory of market structures policy application and formal techniques.

Intermediate Macroeconomics

This course introduces students to basic measures of aggregate-level economic performance such as gross domestic product, personal income, unemployment, the money supply, and the consumer price

index. It presents the major (competing) theories of national income and employment, inflation, exchange rates and the balance of trade, as well as the policy recommendations to which the alternative theories give rise.

Econometrics

This course introduces students to single and multiple regression methods for analyzing data in economics and related disciplines. Extensions include regression with panel data, discrete random variables, instrumental variables regression, and regression with time series data. The objective of the course is for the student to learn how to conduct – and how to critique – empirical studies in economics and related fields. The course statistical software is STATA.

Quantitative Method in Economics

This course covers the basic mathematical techniques required for rigorous study of economics, and it will provide extensive instruction on applications of these techniques to economic problems. Upon successful completion of the course, the student will be able to apply mathematical techniques to problems in advanced microeconomic and macroeconomic theory that appear in typical first-semester Ph.D. courses in good economics graduate programs and to master additional mathematical techniques efficiently and effectively as needed for graduate economics coursework and research. This course is particularly appropriate for students planning to pursue graduate studies in economics or related fields.

Economic Reform and Development in Contemporary China

China includes one-fifth of the world population (four times the USA population) and its economy is one of the fastest growing economies and second only to the USA in the world, with effects far beyond China's borders. Understanding Chinese economic reform and development is therefore of critical importance. This course covers a number of aspects of the Chinese economy and supplies students with systematic knowledge about the economic rationale for development, reform and operation of the contemporary Chinese economy.

On successfully completing this course, students will be able to understand and analyze the basic economic factors including institutional changes that affect the Chinese economy and hence comprehend the operational mechanisms of China's economic development. Students will be able to independently investigate topics related to the Chinese economy, communicate the results, and articulate their own thoughts in a brief presentation to a small group of people.

Through this course students will have the opportunity to acknowledge and understand the dynamic processes, implications and economic rationales of the fast-growing, second-largest world economy.

Scholarships

A list of scholarships for prospective and current students can be found at:
www.istudy.sdu.edu.cn.

Highlights of the Program

Students earn the Shandong University Master degree in a program that is tailored to the needs of international students, who want to have an in-depth exposure to Chinese economy, Chinese economy reform and practice, and Chinese tradition and modern culture, and who have potential intent to work or advance their career in the business circle in China in the future.

Fees

Registration Fee: 400 RMB

Tuition: 32,000RMB/year

Medical Insurance: 800RMB/year

Contact Information

International Admission Office

Department of International Affairs

Email: admission@sdu.edu.cn

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<http://soe.sdu.edu.cn/>

English Taught Program-Master Degree Program of World Economy

What is the program about?

The program aims to prepare students who are interested in the fields of world economy theory, China-EU economic relations, South East Asia economic relations, the US economic research, international economic relations. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as world economy theory, China-EU economic relations, South East Asia economic relations, the US economic research, international economic relations. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

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This course emphasizes the applications of mathematical models to study economic issues in the micro

scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

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This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

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Based on the needs of understanding the real world's economy, this course focuses on the theory and empirical research on Institutional Economics. The content includes definition of institution, persistence of institution, property rights, transaction cost and firm theory, institutional change, path dependence, formal and informal institution, contract theory (including complete and incomplete contracts), institutional and evolutionary economics, and china institutional reform, the institutionalizable of people's inward world, the co-evolution of both gene and culture, and the economic performance of institutions, etc.

- Financial Economics – Asset Pricing

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

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- Frontier Lectures in Economics

This course focuses on the frontiers of economic research topics. Topics include the latest academic papers in the fields of Macroeconomics, Microeconomics, Econometrics and Finance. The teacher will instruct the students to search, read and present academic research papers. Courses are provided three

ways: lecturing from teacher and invited speakers, presentation of students. Evaluation for the course will be based on the attendances and the presentation of selected academic papers.

- **New Political Economy**

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

- **Methodology of Economics**

Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

- **Game Theory**

This course focuses on game theory and basic game models, as well as their application in specific economic problems. Main content include the general representation, definition of strategies, and equilibrium analysis of four basic game models, which are complete information static game, complete information dynamic game, incomplete information static game, and incomplete information dynamic game. The application of those models in the fields of macroeconomics, microeconomics, labor economics, and international economics is also discussed in detail.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

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This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- **Energy economics**

- Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

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This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

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www.istudy.sdu.edu.cn.

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

International Admission Office
Department of International Affairs
Email: admission@sdu.edu.cn
Tel: +86-(0)531 88364854
Website: www.istudy.sdu.edu.cn

Center for Economic Research
Email: cer@sdu.edu.cn
Tel: +86-531-88364128, +86-531-88363677
website: <http://www.cer.sdu.edu.cn/>

English Taught Program-Master Degree program of International MBA

What is the program about?

Today's rapidly developing economy is witnessing an increasing shift of weight towards the Asia-Pacific Region. Here, China is playing a significant role as the largest and most globalized player. While more Chinese open up their horizon with global perspective in their business and daily life, people from outside of China are equally aware of importance of gaining insightful knowledge of China. This would be the first international student only MBA program in China.

The School of Innovation Intermediary (SII) is the bridge between our MBA program and the lasting impact our graduates understand real china. Deeply rooted in the rich soil of Shandong University's century-long history of humanities and academy, the MBA Program has embodied the ideals and missions of her founders and is discovering your path and reshaping your future.

Full-time MBA program was designed for potential young talents of manager and advanced technology talents manager who needs to accelerate their business, upgrade to the high level of their career in future. This Program, supported by the extraordinary faculty and professional administration team, strides to meet the in-depth analysis on China's economy and finance with topical discussions with perspective.

Students earn the Shandong University MBA degree in a program that is tailored to the needs of international students and international working professionals home and abroad, who want to have an in-depth exposure to Chinese economy, Chinese economy reform and practice, and Chinese tradition and modern culture, and who have potential intent to work or advance their career in the business circle in China in the future.

Highlights of the Program:

1st MBA program in China solely offered to international students;
More than 100 years of history at Shandong University (Established in 1902);
Heartland of Chinese culture;
World famous economic/economist leadership program;
Invest in your career: Low cost with BIG returns.

How long does the program last?

Shandong University International MBA offers a two-year full-time program taught in English. It designs a 54-credit curriculum. Students must complete full 54 credits to obtain the MBA degree.

Full-time IMBA Curriculum

Academic Year 1 (2018/2019)

Core Courses:

Business Statistics; Human Resource Management; Operations Management; Technology Management; Organizational Behavior; Financial Accounting; Strategic Management; Risk Management; Monetary Economics; Macroeconomics and Policy; Game Theory and Business Strategies; Creative Marketing.

Selective Courses:

Chinese I; Chinese II; Comparative Study of Chinese and Western Culture; Managerial Economics

Academic Year 2 (2019/2020)

Core Courses:

Managerial Finance; Consumer Behavior; Business Negotiation; Network Security; Advanced Research Methods; Sales Innovation Management.

Selective Courses:

Chinese III; Ancient Chinese Philosophy; Financial Market and Investment; Corporate Law and Corporate Governance

Who is eligible to apply?

- 1) Applicants must be Non-Chinese citizens in good health, at the age of 18 or above, and possess a valid and private passport;
 - 2) Applicants must have bachelor's degree or above;
 - Applicants who have not yet graduated can obtain a pre-graduation letter from their current educational institution stating their expected date of graduation.
 - If accepted, applicant is required to provide the original graduation certificate upon registration. Otherwise, the acceptance qualification will be cancelled.
 - 3) Language Requirement:
 - Applicants with English as native language are exempted from English language certificate.
 - Applicants from non-English speaking countries must provide IELTS (6.0 or above), new TOEFL (80 points or above) or other comparable certification of English proficiency.
 - Applicants who have obtained their highest degree with English as the medium of instruction are exempted from providing language proficiency certification, but proof indicating the language medium is required.
 - 4) No specific requirements for working experience.
- We encourage international students to apply with confidence and real interests to know about China and its economy and even to work or advance their career in China after completion of this program.

What Materials are needed to apply?

Application Form;

Photo Page of Passport;

Bachelor's Degree / Pre-Graduation Letter;

Official University/College Transcript;

Two Letters of Recommendation (from prof/associate prof. or enterprise leaders);

Motivation Letter;

Proof of Language Proficiency (if applicable);

Proof of Employment (if applicable);

Other Attachments (if needed).

How much does it cost?

Registration Fee: 400 RMB

Tuition: 26,000 RMB/year (52,000 RMB in total)

Medical Insurance: 800RMB/year

How to Apply for Scholarship?

To promote the SDU MBA program and encourage the participation of able students, we offer the following studentship:

- Tuition fees plus living expenses
- Tuition fees only
- Bursaries

We adopt an equal opportunity policy and the decisions will be made only on academic merits. Early applications are encouraged.

Apply for scholarship: <http://www.csc.edu.cn/Laihua/>

Contact Information

The School of Innovation Intermediary

Shandong University

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International Admission Office

Email: admission@sdu.edu.cn

Tel: +86-(0)531 88364854

Website: www.istudy.sdu.edu.cn/

English Taught Program- Master Degree Program of Project Management

What is the program about?

International Master of Project Management (IMPM) program is based on the Shandong University's motto - "Reserve talents for the world and seek the prosperity for the nation" and in response to the call of the state "Belt and Road Initiative" and "Go Global" strategy. This program focuses on promoting the education exchange between China and countries along the Belt and Road, cultivating local professional talents of project management for International Enterprises in developing counties, and providing higher education and development opportunities to the young people by combining internationalized and standardized Project Management education system and Chinese traditional culture. Major courses include: Engineering Economics, Introduction to Project Management, Project Planning and Control, Project Procurement & Project Governance, Project Risk Management, Project Feasibility Study and Post-Evaluation, Project Human Resource and Communication, Project Investment and Financing Management, Essentials of PMBOK Framework, etc.

How long does the program last?

The two-year master's program will be fully taught in English. Upon the completion of the program, graduates will earn a Master Degree of Engineering issued by Shandong University, recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a bachelor's degree. While professional experience such as employment or professional qualifications are not essential, these are taken into consideration when awarding scholarships. Successful scholarship candidates tend to have considerable relevant industrial experience as well as vocational or professional qualifications.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 34 (16 study hours per credit), of which no less than 32 credits are for compulsory courses.

Thesis Requirements

Students should undertake original research through the submission of a master's thesis. Students are required to work closely with their supervisor to define a focused topic and conduct detailed research. They begin this process from the beginning by developing the necessary skills to formulate a research proposal. Topics for the thesis are confirmed during Semester 3, either internally through the guidance or proposals from academic staff, or externally through an Associate Partner or industrial contacts. The thesis should be submitted on time and defended during Semester 4.

Program Courses:

Category	Semester	Course Name	Credits	Study Hours
Compulsory Courses	1	Engineering Economics	2	32
	1	Introduction to Project Management	2	32
	1	Project Planning and Control	2	32
	1	Project Procurement & Project Governance	2	32
	1	Project Risk Management	2	32
	1	Chinese Language	2	32
	1	China Survey	2	32
	2	Project Feasibility Study and Post-Evaluation	2	32
	2	Project Human Resource and Communication	2	32
	2	Mid-term Screening and Thesis Proposal	1	16
	2	Cutting-edge Lectures	1	16
	2	Application of Project Management Software	1	16
	2	Research Methodology	1	16
	3-4	Professional Practice	8	128
	Optional Courses	1	Essentials of PMBOK Framework	2
2		Project Investment and Financing Management	2	32
2		Entrepreneurial Management	2	32
2		China Tourism and Gastronomy	2	32
2		Tourism Cultural Studies	2	32

Core Courses:

Engineering Economics

This is a course to introduce the correlations between technology and economics for the purposes of realizing the best allocation of project resources and the balance between technology and economics. Topic include (but are not limited to) the basic theory and methods of the project evaluation and its application, the contents of the project feasibility study. The objective is to prepare students to be able to master the engineering economic evaluation criteria and evaluation methods. On completion of this course, students should be able to:

1. Demonstrate mastery of the basic principles and methods of engineering economics, including the project program comparability principle, the time value capital, optimization principles, economic effect evaluation and preferential methods, project financial evaluation methods, and project risk analysis, etc.
2. Apply basic engineering economic principles and methods to technical and economic analysis, evaluation, and improve the scientific level of investment decision-making and project management.

Introduction to Project Management

This course is a professional course for the students majoring in Project Management. Topics include the knowledge, theory, tools, and application of project management. The objective is to prepare students to be able to master basic theories and knowledge of project management. On completion of this course, students should be able to:

1. Demonstrate mastery of the Nine Major knowledge Areas in PMBOK.
2. Have a better understanding of the basic problems of China's project management practices.

Project Feasibility Study and Post Evaluation

This course implements comprehensive evaluation of a project through technique, economy, society, etc. It is primarily used for project decision-making and approval. The objective is to prepare students to be able to understand the principle and main contents, of feasibility study. On completion of this course, students should be able to:

1. Demonstrate mastery of procedures and skills of project approval.
2. Demonstrate mastery of the skills to undertake project feasibility study, as well as the skills of demonstrating feasibility study reports.

Project Planning and Control

Project planning and control is a required professional course for the students majoring in Project Management. Topics include planning, balance and optimization of project schedule, cost and quality, and the effective control of project plan. The objective is to prepare students to be able to understand the planning and control of project management. On completion of this course, students should be able to:

1. Demonstrate mastery of basic concept related to planning and control of project.
2. Demonstrate mastery of schedule, cost, and resource planning and control.
3. Possess the abilities to analyze and solve project management problems, as well as the practical operational ability in applying management software.

Project Human Resource and Communication

This course aims to enable students to get the idea of project human resource management, and master the characteristics and basic skills of project human resource management. Topic include (but are not limited to) the coordination of the benefits of stakeholders, the performance assessment and improvement. The objective is to prepare students to be able to master related theories and methods of project human resource. On completion of this course, students should be able to:

1. Master the features of human resource at different stages of project life cycle as well as the contents of human resource management.
2. Apply the basic principles and methods learned to reasonably and efficiently handle problems involved with project human resource management.

Project Investment and Financing Management

This is a professional course for students majoring in project management. Topics include (but are not limited to) the project investing and financing methods and modes. It plays an important role in determining the investing structure and financing methods of project, and in controlling the capital cost and risk. The objective is to prepare students to be able to master the evaluation methods of project investment and the basic theories and methods of project investment and financing. On completion of this course, students should be able to:

1. Demonstrate mastery of the financing channels, methods and skills in project investment.
2. Understand the features and application scope of various project financing modes.
3. Design investing and financing scheme.

Project Risk Management

This course mainly focuses on the problems of risk management in project. Topics include (but are not limited to) risk planning, identification, evaluation, response and monitoring, etc., both from a qualitative and quantitative point of view. The objective is to prepare students to be able to understand the impacts of uncertain factors in the project. On completion of this course, students should be able to:

1. Demonstrate mastery of the overall procedures and steps of risk management.
2. Grasp the tools and methods often being used in project risk management.

3. Identify, evaluate, monitor, and response to project risk.

Scholarships

Ministry of Education, Ministry of Commerce and some enterprises have provided various scholarships for international students to apply, which would help the students continue their further study.

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Degree Accreditation

In 2010, Shandong University got the authentication by International Project Management Association (IPMA) and became one of the partner universities of its Project Management Professional certification (IPMP). In 2013, the BSc Project Management and MSc Project Management of School of Management are accredited by Global Accreditation Center (GAC) for Project Management Education Programs , which is initiated by Project Management Institute (PMI). Up to now, only about 40 universities in the world have got this accreditation.

Standardized Curriculum System

As a third party authority for authenticating the curriculum plan of the project management degree on a global scale, in 2001, PMI-GAC was founded and aimed to promote the development and the curriculum establishment of excellent and professional teaching programs on project management. It guarantees the quality of the degree education on project management, assisting universities to improve the curriculum plan on project management of the degree education so as to promote the education and the career development on project management. Besides, PMI-GAC has strict and objective assessment system and process on the degree project of project management. In a word, the project management education established by the School of Management at Shandong University has corresponded with the advanced international education level.

International and Qualified Teachers

Teachers responsible for the project management program of the School of Management comprise scholars and professors who have studied abroad such as the United States, UK, Japan, and Switzerland. In addition, the School of Management has international teacher resources organized by famous university professors from UK, Italy, Australia, Germany, Korea, Hongkong, South Africa, etc. These professors include Professor Rodney Turner, the ex-president of the International Project Management Association and the Chief Editor of International Journal of Project Management, etc.

Cooperation between University and Enterprises

The School of Management at Shandong University has abundant home and abroad schoolfellow enterprises and has established broad cooperative network with these enterprises. A large number of graduates are engaged as senior executives in these home and abroad large enterprises whose businesses are expanded in China and some developing countries such as Africa, the Middle East, Southeast Asia, etc. Therefore, theses enterprises can provide a lot of opportunities for international students of project management to practice, visit and work. The cooperative enterprises for providing overseas students with internship bases and scholarship not only include some government enterprises like China State

Construction Engineering Corporation, China Railway Construction Corporation Limited, China Railway Construction Engineering Group, Power Construction Corporation of China, Inspur, Shandong Gold Group Co., Ltd., Shandong Hi-speed Group Co., Ltd., but also consist of some famous foreign invested enterprises and private enterprises such as Kerui Group Corporation and CP Group.

Integration of Cross-cultural Disciplines

For the setting of training objectives and curriculums, this program has made full use of the historical and cultural status of Shandong Province and the disciplinary advantage of literature and history in Shandong University, combining Traditional Chinese Learning and western modern management techniques via some courses such as cross-cultural communication. Therefore, it has formed a unique training mode at the international level. Besides, in order to provide the students with various favorable conditions to become international top-level talents, the school and the university have carried out abundant student activities and language teaching with characteristics of Chinese traditional culture.

Professor Name List

Rodney Turner

Professor of Project Management at the SKEMA Business School, Lille France

Visiting Professor at Henley Business School

Adjunct Professor at the University of Technology Sydney and the Kemmy Business School, University of Limerick

Editor of International Journal of Project Management

Vice President, Honorary Fellow and former chairman of the UK's Association for Project Management

Former President and Chairman of the International Project Management Association

Fellow of the Institution of Mechanical Engineers

Leon Pretorius

Professor, Department of Engineering and Technology Management , Graduate School of Technology Management , University of Pretoria , South Africa

Member of the editorial board of R&D Journal of SAIMEchE as well as of the editorial advisory board of the SA Jnl of Industrial Engineering

Registered Pr.Eng with ECSA.

Honorary Fellow SAIMEchE.

Member ASME

Member IEEE

Member SAIIE

Member of ASME. In USA

Member SA Institution Industrial Eng .

Member of SA Adademie vir Wetenskap en Kuns (SA Academy for Science and Arts)

Richard Fellows

Professor, Loughborough University

Visiting Professor, the University of Hong Kong

Dissertation Tutor, Cambridge University

Member of the Editorial Board of the Journal of Quantity Surveying and Construction Business

Member of the Editorial Board, International Journal of Construction Marketing

Member of the Editorial Board, RICS Research Papers Series
Member of the Editorial Board, Construction Information Quarterly
Member of the Editorial Board of Construction Management and Economics

Frank Schultmann

Professor and Director of Project Management, University of Adelaide, Entrepreneurship, Commercialization and Innovation Centre (ECIC)
Member of the Editorial Board "Smart and Sustainable Built Environment", published by Emerald
Chair of the Advisory Committee of the CIB Working Commission 116 "Smart and Sustainable Built Environments"
Representative of the German Society of Operations Research (GOR) for The Association of European Operational Research Societies (EURO)
Member of accreditation agency ASIIN and representative of universities in the Technical Committee "Industrial Engineering"
Member of the Advisory Council of the German Academic Association for Business Research (VHB)

Antonio Calabrese

Associate Professor, Department of Management, Economics and Industrial Engineering, Politecnico di Milano, Italy
Director of the "Master in Strategic Project Management (European)" (post-graduate Specializing Master offered jointly by Politecnico di Milano, Heriot-Watt University, Edinburgh, UK and Umea University, Sweden, 90 ECTS and 16 months worth – program funded within the Erasmus Mundus framework by the EU Commission), MIP Graduate School of Business
Director of the "Master in Project Management" (post-graduate Specializing Master of Politecnico di Milano, 60 ECTS, 16 months), MIP Graduate School of Business
Director of MBA & Executive MBA programmes, MIP Graduate School of Business
Member of the IPMA Italy board (International Project Management Association - Italy)
Member of ANIMP (Italian Association of Industrial Plants, national member of IPMA) and member of the Training courses Committee
Reviewer and member of the Scientific Committee ICEC 2014 – IX World Congress, Milan, Italy
Member of the editorial board of the national journal "Impiantistica Italiana" (Industrial plants), Italy
Member of the scientific committee of the national journal "L'Industria Meccanica" (Mechanical Industries), Italy

Zhang Xueqing

Associate Professor, Department of Civil and Environmental Engineering, the Hong Kong University of Science and Technology
Member, American Society of Civil Engineers
Member, Canadian Society for Civil Engineering
Executive Member, Canadian Society for Civil Engineering Hong Kong Branch Member, Board of Examination, Hong Kong Institute of Construction Managers
Editor-in-Chief, International Journal of Architecture, Engineering and Construction, published by the International Association for Sustainable Development and Management, Canada
Editor, International Journal of Management Science and Engineering Management, Published by World Academic Press, World Academic Union, England, UK

President, International Association for Sustainable Development and Management, Canada

Ding Ronggui

Professor, School of Management, Shandong University

Director of Project Management Institute, Shandong University

Vice president of Beijing Project Management Association

IPMA Award Assessor

Member, PMI Global Accreditation Committee for Project Management Education Programs (GAC) in China

Chief Management Expert of Project Management Review

Xue Yan

Professor, Peking University

Visiting professor, Cambridge University

Former vice president of the International Project Management Association

Vice director of Project Management Research Committee China

Fees

Registration Fee: 400 RMB Tuition: 123000RMB Medical Insurance: 800RMB/year

Contact Information

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English Taught Program-Master Degree Program of Political Economics

What is the program about?

The program aims to prepare students who are interested in the fields of property rights theory and reform of property system, research on enterprise theory, human capital and development economics, research on socialist economic theory, urban economics, research on investment economics, new political economics. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as property rights theory and reform of property system, research on enterprise theory, human capital and development economics, research on socialist economic theory, urban economics, research on investment economics, new political economics. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- Intermediate and Advanced Microeconomics

This course emphasizes the applications of mathematical models to study economic issues in the micro scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

- Intermediate and Advanced Econometrics

This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

- Institutional Economics

Based on the needs of understanding the real world's economy, this course focuses on the theory and empirical research on Institutional Economics. The content includes definition of institution, persistence of institution, property rights, transaction cost and firm theory, institutional change, path dependence, formal and informal institution, contract theory (including complete and incomplete contracts), institutional and evolutionary economics, and china institutional reform, the institutionalizable of people's inward world, the co-evolution of both gene and culture, and the economic performance of institutions, etc.

- Financial Economics – Asset Pricing

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- Academic English

This graduate course imparts students with skills necessary to write an English thesis or journal article. Particularly, students will be introduced to academic writing skills such as appropriate sentence structure and flow of thoughts using strong linkages to clearly present ideas. Students will not only learn skills to organize ideas through mind maps and flow charts, but also know how to search for relevant literature in their field. They will learn how to write abstracts, introductions as well as conclusions with the aim of capturing the key information from the literature. They will also be taught how to properly cite articles as well as create reference lists. Students will also have to do projects which require public speaking in English.

- Frontier Lectures in Economics

This course focuses on the frontiers of economic research topics. Topics include the latest academic

papers in the fields of Macroeconomics, Microeconomics, Econometrics and Finance. The teacher will instruct the students to search, read and present academic research papers. Courses are provided three ways: lecturing from teacher and invited speakers, presentation of students. Evaluation for the course will be based on the attendances and the presentation of selected academic papers.

- **New Political Economy**

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

- **Methodology of Economics**

Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

- **Game Theory**

This course focuses on game theory and basic game models, as well as their application in specific economic problems. Main content include the general representation, definition of strategies, and equilibrium analysis of four basic game models, which are complete information static game, complete information dynamic game, incomplete information static game, and incomplete information dynamic game. The application of those models in the fields of macroeconomics, microeconomics, labor economics, and international economics is also discussed in detail.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- **Empirical Strategy**

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- **Energy economics**

- Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate,

and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- **Development Economics**

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- **Theory and Application of Computable General Equilibrium Model**

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

A list of scholarships for prospective and current students can be found at:

www.istudy.sdu.edu.cn.

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

International Admission Office
Department of International Affairs
Email: admission@sdu.edu.cn

Tel: +86-(0)531 88364854

Website: <http://en.sdu.edu.cn/>

Center for Economic Research
Email: cer@sdu.edu.cn
Tel: +86-531-88364128, +86-531-88363677

website : <http://www.cer.sdu.edu.cn/>

English Taught Program-Master Degree Program of Western Economics

What is the program about?

The program aims to prepare students who are interested in the fields of institutional economics, game theory and microeconomics, modern macroeconomics and microeconomics, history of economic theory, econometrics, law and economics. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as institutional economics, game theory and microeconomics, modern macroeconomics and microeconomics, history of economic theory, econometrics, law and economics. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates of candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- **Intermediate and Advanced Microeconomics**

This course emphasizes the applications of mathematical models to study economic issues in the micro

scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

- Intermediate and Advanced Econometrics

This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

- Institutional Economics

Based on the needs of understanding the real world's economy, this course focuses on the theory and empirical research on Institutional Economics. The content includes definition of institution, persistence of institution, property rights, transaction cost and firm theory, institutional change, path dependence, formal and informal institution, contract theory (including complete and incomplete contracts), institutional and evolutionary economics, and china institutional reform, the institutionalizable of people's inward world, the co-evolution of both gene and culture, and the economic performance of institutions, etc.

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This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- Academic English

This graduate course imparts students with skills necessary to write an English thesis or journal article. Particularly, students will be introduced to academic writing skills such as appropriate sentence structure and flow of thoughts using strong linkages to clearly present ideas. Students will not only learn skills to organize ideas through mind maps and flow charts, but also know how to search for relevant literature in their field. They will learn how to write abstracts, introductions as well as conclusions with the aim of capturing the key information from the literature. They will also be taught how to properly cite articles as well as create reference lists. Students will also have to do projects which require public speaking in English.

- Frontier Lectures in Economics

This course focuses on the frontiers of economic research topics. Topics include the latest academic papers in the fields of Macroeconomics, Microeconomics, Econometrics and Finance. The teacher will instruct the students to search, read and present academic research papers. Courses are provided three

ways: lecturing from teacher and invited speakers, presentation of students. Evaluation for the course will be based on the attendances and the presentation of selected academic papers.

- **New Political Economy**

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

- **Methodology of Economics**

Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

- **Game Theory**

This course focuses on game theory and basic game models, as well as their application in specific economic problems. Main content include the general representation, definition of strategies, and equilibrium analysis of four basic game models, which are complete information static game, complete information dynamic game, incomplete information static game, and incomplete information dynamic game. The application of those models in the fields of macroeconomics, microeconomics, labor economics, and international economics is also discussed in detail.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- **Empirical Strategy**

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- **Energy economics**

- Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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website : <http://www.cer.sdu.edu.cn/>

English Taught Program-Master Degree Program of Population, Resources and Environmental Economics

What is the program about?

The program aims to prepare students who are interested in the fields of political economics, history of economic thought, economic history, western economics, population, resources and environmental economics, world economy. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as political economics, history of economic thought, economic history, western economics, population, resources and environmental economics, world economy. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- Intermediate and Advanced Microeconomics

This course emphasizes the applications of mathematical models to study economic issues in the micro scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

- Intermediate and Advanced Econometrics

This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

- Institutional Economics

Based on the needs of understanding the real world's economy, this course focuses on the theory and empirical research on Institutional Economics. The content includes definition of institution, persistence of institution, property rights, transaction cost and firm theory, institutional change, path dependence, formal and informal institution, contract theory (including complete and incomplete contracts), institutional and evolutionary economics, and china institutional reform, the institutionalizable of people's inward world, the co-evolution of both gene and culture, and the economic performance of institutions, etc.

- Financial Economics – Asset Pricing

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- Academic English

This graduate course imparts students with skills necessary to write an English thesis or journal article. Particularly, students will be introduced to academic writing skills such as appropriate sentence structure and flow of thoughts using strong linkages to clearly present ideas. Students will not only learn skills to organize ideas through mind maps and flow charts, but also know how to search for relevant literature in their field. They will learn how to write abstracts, introductions as well as conclusions with the aim of capturing the key information from the literature. They will also be taught how to properly cite articles as well as create reference lists. Students will also have to do projects which require public speaking in English.

- Frontier Lectures in Economics

This course focuses on the frontiers of economic research topics. Topics include the latest academic

papers in the fields of Macroeconomics, Microeconomics, Econometrics and Finance. The teacher will instruct the students to search, read and present academic research papers. Courses are provided three ways: lecturing from teacher and invited speakers, presentation of students. Evaluation for the course will be based on the attendances and the presentation of selected academic papers.

- **New Political Economy**

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

- **Methodology of Economics**

Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

- **Game Theory**

This course focuses on game theory and basic game models, as well as their application in specific economic problems. Main content include the general representation, definition of strategies, and equilibrium analysis of four basic game models, which are complete information static game, complete information dynamic game, incomplete information static game, and incomplete information dynamic game. The application of those models in the fields of macroeconomics, microeconomics, labor economics, and international economics is also discussed in detail.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- **Empirical Strategy**

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- **Energy economics**

- Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate,

and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

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Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

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English Taught Program-Master Degree Program of Quantitative Economics

What is the program about?

The program aims to prepare students who are interested in the fields of econometric model and its application, mathematical economics, mathematical finance, analysis of financial econometric. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as econometric model and its application, mathematical economics, mathematical finance, analysis of financial econometric. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in undergraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- Intermediate and Advanced Microeconomics

This course emphasizes the applications of mathematical models to study economic issues in the micro scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

- Intermediate and Advanced Macroeconomics

This course aims to present the basic concepts and analytical framework of macroeconomics, including national income accounts, economic growth, business cycle, Keynesian economics and its microeconomics foundation, consumption, investment, employment and unemployment, inflation and monetary policy, budget deficits and fiscal policy etc.

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This course introduces the probability and statistics theory, which provide necessary mathematical tools for modeling uncertainty and performing quantitative analysis embedded in econometrics including random variables, distributions, convergence theorems, estimations, and hypothesis testing. At the end of the course, students are expected to understand the ideas and methods used in developing the probability and statistics theory, and get the skills of performing statistical analysis. In summary, this course provides mathematical concepts and analytical tools for econometrics.

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This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

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This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

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Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

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English Taught Program-Master Degree Program of Labour Economics

What is the program about?

The program aims to prepare students who are interested in the fields of theory and practice of human capital, research on employment and security. A variety of English taught courses will be offered to students, including Intermediate and Advanced Microeconomics, Intermediate and Advanced Macroeconomics, Intermediate and Advanced Econometrics, Academic English, Frontier Lectures in Economics, New Political Economics, Methodology of Economics, Institutional Economics, Financial Economics, Game Theory, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The three-year Master Degree program will be fully taught in English and will focus on several different research areas, such as theory and practice of human capital, research on employment and security. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

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How to Graduate?

Credit Requirements

The total credits for the program are no less than 36, of which no less than 27 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (the first five courses), 2 credits for each course (other courses).

- **Intermediate and Advanced Microeconomics**

This course emphasizes the applications of mathematical models to study economic issues in the micro scope, including the behaviors of consumers and firms as well as their aggregate consequences. Most

topics in modern theoretical microeconomics will be discussed, including consumer theory, firm theory, choice under uncertainty, game theory, market structure, information economics and general equilibrium model. This course aims to provide students a general understanding of modern microeconomics theories as well as an ability to apply these theories in further researches.

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- **New Political Economy**

This course examines the effect of politics on the economy. The content includes public choice, voter theory, bureaucracy and politician theory, interest group theory, constitutional political economy, rent-seeking and corruption, financial political economy, development political economy and international political economy.

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Based on three levels, this course focuses on economic philosophy, the assumption of economics and concert research methods. The content includes: (1) philosophy of science and economics, as well as expounding the scientific attributes of economics from their perspective; (2) the relationship of assumptions, theories and realities; (3) research methods used in economics.

Optional Courses:

2 credits for each course.

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English Taught Program- Master Degree Program of Materials Science and Engineering

What is the program about?

The program pays great attention to the cultivation of students' professional knowledge and engineering ability, covering a broad research fields, such as:

- a. Materials Science (metallic, ceramic and polymer materials) to investigate the relationship between chemical composition- structure-processing and properties;
- b. Materials Engineering (casting, plastic forming and welding technologies) to shape the desired materials into parts or components with acceptable performance/cost ratio;
- c. Materials Physics and Chemistry to research the chemical methods for synthesizing new materials or physical properties of functional materials; materials design and computational materials science are also available in this field;
- d. Materials Packaging to investigate the packaging design, manufacture and mechanical test of industrial products. This is an inter-disciplinary research field combining art design, materials processing and computer simulation.

How long does the program last?

The three-year master's program will be fully taught in English and provide several different research directions. While Year One courses provide the fundamental knowledge of materials science and engineering, Year Two is for project research and paper writing. The enrolled students may choose one of the school's research groups, and one faculty supervisor who has overseas experience of more than one year. Year Three is for ending project and thesis writing. The enrolled students write thesis under the guidance of supervisor and conclude their project.

The program core courses provide an essential knowledge of materials science and engineering, as well as recent progress in both new materials and new technologies. The optional courses, meanwhile, are of two modules based on the research direction, but students are encouraged to select inter-module courses. Upon the completion of the program, students will obtain a Master's Degree of Engineering, recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a bachelor's degree in materials science and engineering as well as good English communication ability. Applicants may also be accepted (1) who have a bachelor's degree in physics or chemistry and have research experience related to materials science; or (2) who have a Bachelor's degree in mechanical engineering and research experience related to materials processing.

Program Structure

Core Courses

Essentials of Materials Science and Engineering

Thermodynamic and Kinetic Principles of Materials

Introduction to Structure and Properties of Materials
Phase Transformation in Materials
Serials Lectures of Advanced Materials and Technologies

Optional Courses:

Research fields: Materials Science, Materials Physics and Chemistry
Access to Multivariate Data Analysis
High Performance Composite Materials
Advanced Ceramics
Advanced Polymer Science and Technology
New Methods for Polymer Synthesis
Test and Analysis Methods for Materials
Functional Materials
Engineering Materials
Materials Chemistry
Research fields: Materials Engineering, Packaging Materials and Containers
Thermo-welding of Physics
Principles and Technologies of Welding
Welding Inspection and Controlling
Theories and Technologies of Surface Engineering
Sheet Metal Forming: Theory and Technology
Fundamentals of Solidification
Mechanical Properties of Materials
Advanced Manufacturing Technologies
Metal Matrix Composites

Credit Requirements

The total credits for the program are no less than 30, in which no less than 18 credits are for compulsory (core) courses.

Master's Thesis

In the third year, students should finish their master's thesis, which is no less than 20,000 words in total, and defend it in the fourth term (in mid-May). The students should work closely with their advisor to define a focused topic and conduct the research. Students should also be bold and actively engaged in research activities, and strive to publish papers in academic journals.

Graduation Requirements

Before graduate students can be officially admitted to degree candidacy, they must fulfill at least one of the following requirements:

- a. publish an academic paper in relevant journals or academic conferences
- b. participate in and complete an engineering project and submit a summary report
- c. complete a phase of a development project and submit a summary report

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Discipline of Material Science and Engineering ranked 112nd in 2014 among top 1% of ESI (Essential Science Indicators) Int'l Discipline Ranking.

● Faculty: 9, Staff: 153, Professor: 51, Associate Professor: 34, Ph.D. supervisor: 40

● Subjects:

1 First-level national key subject

3 Second-level national key subjects

4 Key subjects of Shandong province

● Labs

1 Key laboratory of the Ministry of Education

3 Key laboratories of Shandong province

4 Engineering technology research centers of Shandong province

Fees

Registration Fee: 400 RMB Tuition: 34,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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School of Materials Science and Engineering
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Tel: 86-(0)531 88392550
<http://www.cmse.sdu.edu.cn/english/>

English Taught Program-Master Degree Program of Electrical Engineering

What is the program about?

The program is to cultivate students who are interested in the fields of power system and its automation, electrical machinery and electrical apparatus, power electronics and power drives, high voltage and insulation technology, electrical engineering theory and new technology under the background of globalization. A variety of English taught courses are offered to students, including Engineering Mathematics, Power system analysis, Modern control theory, Distributed Generation and Micro-grid

Renewable Generation Technology, HVDC&FACTS etc., which aim to train the international candidates to grasp the solid basic theory of electrical engineering as well as the systematic knowledge in the professional field, moreover, to gain the ability to carry out scientific research independently or to develop career as technical specialist.

How long does the program last?

The three-year Master programs will be fully taught in English and provide several different research areas, such as Power System and its Automation, Relay Protection, Electrical Machinery and Electrical Apparatus, Power Electronics and Power Drives, Technology of New Energy, High Voltage and Insulation Technology, Electrical Engineering Theory and New Technology. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education, People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in power system and its automation, electrical machinery and electrical apparatus, power electronics and power drives, high voltage and insulation technology, or electrical engineering theory and new technology. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 30, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

The students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisors for a research topic. Graduates should also be actively engaged in research activities, and strive to publish papers in the academic journals.

Program Courses

Core Courses

- Engineering Mathematics (4 credits)

The engineering mathematics is the basic course of the engineering master's degree. The content includes the matrix theory, the numerical calculation method and the mathematical statistics. This course focuses on the basic concepts, basic theory and basic methods, and emphasizes the intuition and application background. It is the basic course of electrical engineering.

- Power system analysis (3 credits)

Power system analysis is a compulsory course for master in power system and its automation. The main task is to master the modern power system stability and transient analysis of the basic content and a variety of analytical methods. This course is fully linked with reality, clearly introduced scientific research of the power system analysis in recent years.

- Modern control theory (3 credits) The course introduces the basic theory of modern control system and the main methods of analysis and design of control system. Furthermore, the course introduces the mathematical model of modern control theory, the methods and characteristics of state space expression, the method of solving state space expression, the controllability, observability and discrimination of control system, the method of system stability, the method of linear time-invariant system Synthesis (design), the optimal control law and so on. The course is fully integrated with the power system research needs, and exercises the students' ability to solve practical engineering problems.

Optional Courses

2 credits for each course

- Distributed Generation and Micro-grid

This course is an elective course for electrical engineering masters. Through this course, students can master the basic concepts, technical standards and related theories of distributed generation and micro grid, and keep track of the current research situation at home and abroad. The main contents of this course include: the concept of distributed generation, distributed generation technology types (wind power, solar photovoltaic power generation, etc.), distributed power grid and control. Micro-grid structure and characteristics, micro-grid operation mode and control method; distributed generation on the power distribution system and related issues, island detection technology.

- Renewable Generation Technology

The current global energy shortage is becoming more and more serious, and the search for and use of new energy is becoming the main task of all countries. This course provides a comprehensive introduction to the resource situation of new and renewable energy sources, and use the principles and techniques. It is suitable for postgraduate study and reference in energy research to enhance students' ability to analyze, judge and solve problems in the current energy environment.

- HVDC&FACTS

HVDC transmission is the most comprehensive and complicated system in power system application, and has become one of the most active fields in power grid development. The purpose of this course is to promote the HVDC engineering technology theory and application of knowledge in the power system automation and power electronics in the direction of the popularity of graduate students. This course introduces the basic concept, engineering constitution, technology development and main equipment of HVDC, discusses the basic working principle of HVDC, the problems of harmonic and reactive power, the control and protection of HVDC, the interaction between HVDC and AC system and the control of

the exchange system, which also includes the new progress of flexible DC transmission and UHVDC transmission and other DC transmission engineering technology.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

School of Electrical Engineering of Shandong University which has a long history, was founded in 1946. At present, the school are composed of 7 Institutes, including Institute of Power Systems, Institute of Relay Protection, Institute of Electrical Machinery and Electrical Apparatus, Institute of Power Electronics and Power Drives, Institute of Electrical Theory and New Technology, Institute of High Voltage and Insulation Technology, Institute of Intelligent Grid and Renewable Energy. The school has Key Laboratory of Power System Intelligent Dispatch and Control (Ministry of Education), Global Energy Internet (Shandong) Collaborative Innovation Center, Provincial Key Laboratory of UHV Power Transmission and Transformation Technology and Gas Discharge, Shandong Provincial Engineering Laboratory of Electric Vehicle, and 4 Provincial Engineering Technology Center of Magnetic Suspension Bearing, Permanent Magnet Motor, Magnetic Separation, Power Quality. Moreover, the school has doctorate disciplines of electrical engineering and post-doctoral research grant mobile station. At present, School of Electrical Engineering has 20 PHD supervisors, 64 master supervisors, and more than 80% teachers have a doctor's degree. There are more than 500 doctoral students and master students in the school, some of them are from all around the world. At the same time, the school also has a good partnership and joint training doctoral students with more than a dozen well-known institutions of the United States, Britain, France, Australia, Singapore, Hongkong, etc.

The school has scientific research strength, and made a number of important research results. In recent years, the school has published over 50 monographs, translations, textbooks, etc., and more than 1,500 high-level academic papers in core journals at home and abroad, among of them 660 are accepted by SCI, EI and ISTP, and authorized more than 100 patents. The school has accomplished 6 national key programs of 973 Program, 863 Program, Science and Technology Support Program and other key programs and obtained 5 state-level Invention Award and Technology Progress Award, 30 provincial and ministerial level scientific and technological awards. Through converting the academic research to the social results, the school made a significant contribution for China's economic development and social progress.

Through the academic research, professional practice and student activities, the school develops the students' theoretical and practical ability, and strives to bring the cultivated talents into a dynamic professional theoretical system, strong thinking and practical ability, and high professional practical accomplishment. As a result, the school has training a large number of senior specialized personnel, and made a significant contribution for the development of China's power and related undertakings. including the ex-minister of National Power Industry Dazhen Shi, the current chairman of Global Energy Internet Development Cooperation Organization and the general manager of the State Grid Corporation Zhenya Liu, the honorary president of the State Grid Electric Power Research Institute, the Chinese Academy of Engineering (CAE) academician, the internationally renowned power system automation expert Yusheng Xue, Academician of Chinese Academy of Sciences Jiancheng Fang and other famous alumni.

Fees

Registration Fee: 400 RMB

Tuition:34000RMB/year

Medical Insurance: 800RMB/year

Contact Information

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website : <http://www.ee.sdu.edu.cn/>

English Taught Program-Master Degree Program of Computer Science and Technology

What is the program about?

The program is to give students a fundamental understanding of the various areas of computer science and technology, as well as a broad understanding of current research issues, with in-depth insight into one or more fields, and skills in research methodology through one-year research activities. The program aims to make the students capable of independent participation in research and development work, and to prepare the students for challenges in future careers.

How long does the program last?

The three-year master's program will be fully taught in English. Upon the completion of the program, graduates will obtain a Master's Degree of Computer Science and Technology (MSc), recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a bachelor's degree in computer science and engineering or computer related areas. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 30, in which no less than 24 credits are for compulsory (core) courses.

Master's Thesis

In the third year, the students must finish their master's thesis with no less than 20,000 words in total, and defend it in the sixth term (in mid-May).

Graduation Requirements

Before graduate students can be officially admitted to degree candidacy, they must satisfy one of the following requirements:

- a. complete an academic paper to publish in relevant journals and academic conferences
- b. participate in a research plan and submit a summary report
- c. complete a phase of a development project and submit a summary report

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Program Courses

Core Courses:

Algorithm Design
Database Systems
Computer Graphics

Optional Courses:

Data Mining
Distributed Systems
Parallel Computing
Cryptography
Design of VLSI and System
GPU Computing
Computer Vision and Image Analysis
Real-time Systems
Advanced Computer Networks
Software Security
Machine Learning
Pattern Recognition
Data and Computer Communication
Computer and Information Security
Human-computer Interaction Technology

Highlights of the Program

Founded in 1971, School of Computer Science and Technology offers accredited PhD programs in Computer Science & Technology and Software Engineering, and has two postdoctoral training stations in Computer Science & Technology and Software Engineering. The School currently has 111 full-time faculty members, of which there are 20 doctoral supervisors, 33 professors, and 57 associate professors. Both Computer Science & Technology and Software Engineering in our School are key disciplines in Shandong Province. The School also houses a number of national and provincial laboratories/centers, including the National Engineering Laboratory for E-Commerce Transaction Technology, the Ministry of Education Key Laboratory for Cryptography and Information Security, the Ministry of Education Engineering Research Center for Digital Media Technology, the Shandong Provincial Key Laboratory for Software Engineering. There are over 1,100 students currently enrolled in various programs offered by the School, including approximately 130 PhD students, 410 Master's students, and 590 undergraduate students. The students will be able to have internship opportunities at Microsoft Asia Academe, IBM China Research Laboratory, Baidu Research Institute, Alibaba etc. Our graduates have got offers from top universities, research institutes and international companies.

Fees

Registration Fee: 400 RMB Tuition: 34,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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<http://www.cs.sdu.edu.cn/default.do>

English Taught Program- Master Degree Program of China Studies

What is the program about?

“China Studies” is a comprehensive and interdisciplinary study area which combines sinology with contemporary China studies to form a new disciplinary. Its China Studies Master program (MCS) focuses on the study of understanding China from economic, political and cultural perspectives by applying multiple methodologies such as humanities and social sciences. It contains not only the study of Chinese history and culture, but also the study on Chinese contemporary issues. The program is dedicated to educate those who become the professionals with broad knowledge and deep understanding of China.

How long does the program last?

The three-year master’s program will be fully taught in English. Upon the completion of the program, graduates will earn a Master’s Degree of Law, recognized by the Ministry of Education of the People’s Republic of China.

Who is eligible to apply?

Applicants should have a bachelor’s degree in humanities and arts. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

Program Structure

Core Courses

Transformation of Contemporary Chinese Society
Review and Prospects of Chinese Economic Reform
Introduction to Chinese Social History
Development of Chinese Higher Education
Introduction to Chinese Law
Chinese Culture and Philosophy
China’s Politics and Government

Elective Courses (6 modules + Culture Experience)

1. Politics :

International Relations of East Asia
Diplomacy of Contemporary China
China’s Public Policy
China’s Social Welfare and Social Policy

2. Economics :

China’s Trade and Foreign Direct Investment
Financial System of Contemporary China
Comparative Analysis of Chinese and Western Financial Systems and Institutions

Industrial and Competition Policies in China

...

3. Literature & Media

Intercultural Communication in the Chinese Context

Cultural Differences in Screen and Literature

Contemporary Chinese Media and Movies

Understanding China through its fiction

4. History & Geography through the Study of Tourism

Chinese Gastronomy Tourism

Tourism Management in China

Appreciating the Culture of China through Tourism

Western Influence on Chinese Culture after the Sixteenth Century

5. Law

Chinese Intellectual Property Law

Chinese Corporate Law

Chinese Civil Law

Chinese Legal Culture

...

6. Philosophy

Early Confucianism

The Wisdom of Laozi and Zhuangzi

The Zhouyi (or Yijing) Book of Changes and Traditional Chinese Culture

Chinese Buddhism

7. Culture Experience

Ancient Chinese Characters

Chinese Calligraphy

Chinese Martial Arts

Traditional Chinese Medicine

...

Credit Requirements

The total credits for the program are no less than 30, in which no less than 18 credits are for compulsory (core) courses. Shandong University recognizes the courses and the credits of the same or similar courses from its cooperative institutions. The Chinese language courses taught at the SDU cooperative institutions and the credits can also be recognized. The total number of the recognized transferred credits is not exceeded up to 12 credits, among which no more than 3 credits are of specialized courses.

Master's Thesis

In the third year, students must finish their master's thesis, and defend it in the sixth term (in mid-May). They can also begin their Master thesis in the second year if they can satisfy the requirement for academic course credits. Students must work closely with their supervisors to define focused topics,

which should be oriented in solving academic problems. Students should also be independently conducted and actively engaged in research activities under the supervision of their supervisors.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

- Cross-disciplinary and Inter-cultural concepts
- A balanced mixture of theoretical research and practical social work
- “Second classroom”: Professional tours of Beijing, Shanghai, etc.
- Innovative course designs cater to the needs of students and partner universities

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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English Taught Program- Master Degree Program of International Relations

What is the program about?

The program is to prepare the ground for those who would play the leading role in the fields of international relations, foreign affairs and other public policy fields under the background of globalization. Students will take a variety of courses, including International Relations Theory, Comparative Politics, Foreign Policy Analysis etc., which will also cover information related to China's actual conditions, especially China's foreign policy and relations with other countries.

How long does the program last?

The two-year master's program will be fully taught in English and provides several different research concentrations, like International Cooperation, Regional Studies (Europe, East Asia), International Security, Chinese Foreign Policy, and China and the World. Upon the completion of the program, graduates will earn a Master's Degree of International Relations, recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a bachelor's degree in political science, economics, law, education, history, or linguistics. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

Program Structure

Core Courses

Comparative Politics
International Relations Theory
Major Issues in International Politics
Foreign Policy Analysis
Contemporary China Foreign Policy
European International Relations
East Asian International Relations

Optional Courses

Sino-US Relations and the US Foreign Policy
The International Strategy and Foreign Policy of Russia
Introduction to Political Science
Democracy: Theory and Practice
Foreign Political System
Environmental Policy

Credit Requirements

The total credits for the program are no less than 30, of which no less than 18 credits are for compulsory (core) courses.

Master's Thesis

In the second year, the students must finish their master's thesis, and defend it in the fourth term (in mid-May). The students must work closely with their advisor to define a focused topic and conduct the research. Graduates should also be bold and actively engaged in research activities, and strive to publish papers in academic journals.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Well-developed program and high degree of satisfaction in past years
An emphasis on leadership and multicultural team building
Flexible curriculum to accommodate candidates' personal career plans
Continuing education opportunities

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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English Taught Program-Master Degree Program of Financial Mathematics and Financial Engineering

What is the program about?

The program is to prepare the ground for those who would play the leading role in both scientific research and application in the fields of financial mathematics and financial engineering. Students will take a variety of courses, including Advanced Probability Theory, Advanced Mathematical Statistics, Stochastic Processes, Linear Models etc., which will also cover information related to quantitative finance, especially the application of mathematical knowledge in finance .

How long does the program last?

The three-year master's program will be fully taught in English and provides several different research concentrations, like Stochastic Analysis and its Applications in Mathematical Finance, Mathematical Theories and Applications in the Insurance and Finance, Financial Mathematics, Financial Engineering and Financial Management , Financial Statistics, and Mathematical Economics. Upon the completion of the program, graduates will earn a Master's Degree of Science or Economics, recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Bachelor's degree in mathematics. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are 30, of which 24 credits are for compulsory (core) courses including Advanced Lecture and Social Practice included, and 6 credits for optional courses.

Thesis Requirements

In the third year, students must finish their Master's thesis, and defend it in the sixth term (in mid-May). They must work closely with their advisor to define a focused topic and conduct the research. Students should also be bold and actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course

e. Advanced Probability Theory

This course aims to familiarize students with good knowledge of probability theory and measure and its

applications. The main content of this course focuses on measurement theory and stochastic integral. The range of the course covers measurable spaces, measurable functions, conditional expectation, limit theory, Brownian motion, Ito's integral, stochastic integral and so on. Through this course students will better understand the probability theory used in other subjects, like financial mathematics and statistics.

f. Advanced Mathematical Statistics

The objective of this course is to make students understand the basic concepts of mathematical statistics and get familiar with the application in practice. This course mainly includes a thorough background of contemporary statistical theory and the prerequisite for the course is basic measure theory. The concrete content covers fundamentals of statistics, such as point estimation, hypothesis testing and interval estimation, statistical decision theory and bayes analysis. Also some popular well-used statistical procedures to deal with real datasets are included.

g. Stochastic Processes

The aim of this course is to offer students the basic training on stochastic processes theory including stochastic differential equations, stochastic analysis and so on. This course is a quantitative description for the dynamic relationship among a series of random events. Stochastic processes is an important tool to study random phenomena in natural, engineering, astrophysics and decision making. The main content of this course includes stochastic process, brownian motion, martingale representation theorem, Ito's integral and stochastic differential equation.

h. Linear Models

The objective of this course is to make sure the students have good knowledge of linear models theory and its applications. The course focuses on various classes of models and their properties. The main content of this course includes basics of linear models and linear mixed model. The course also covers to generalized linear models and generalized linear mixed models. Some variations on the main models, such as longitudinal data models and nonlinear models are also discussed in this course.

i. Backward Stochastic Differential Equations and Application

This course aims to make sure the students have good knowledge of backward stochastic differential equation theory and its applications. This course mainly includes backward stochastic differential equation and nonlinear expectations. The concrete contents are brownian filtration consistent evaluations and expectations, backward stochastic differential equations: g-evaluations and g-expectations, dynamic risk measures, numerical solution of BSDEs.

Optional Courses:

2 credits for each course

● Financial Mathematics

This course aims to make students learn the skills to solve financial problem using mathematics. Students will be introduced to the knowledge related to pricing of derivatives. The course introduces Black-Scholes pricing formula and Mean-Variance approach of Markowitz for portfolio optimization. The course also includes topics of interest rate and interest rate derivatives, including Optimal Trading Strategies, Credit Scoring Models and Portfolio Credit Risk Management.

● Stochastic Control and Its Applications

The objective of this course is to get students familiar with the application of stochastic control. Two principal approaches in solving stochastic optimal control problems are introduced in this course:

Pontryagin's maximum principle and Bellman's dynamic programming. The main contents of the course are basic stochastic calculus, stochastic optimal control problems, maximum principle and stochastic hamiltonian systems, dynamic programming and HJB equations, the relationship between the maximum principle and dynamic programming.

- nonlinear expectations

The course aims to introduce a wide knowledge of nonlinear expectation and its application, especially in finance with uncertainty. This course is one of the characteristic courses in institute for financial studies, which is proposed by professor Peng shige. The main contents of this course conclude sub-linear expectation and risk measures, law of large numbers and central limit theorem, G-brownian motion and Ito's integral, G-martingales and Jensen's inequality, stochastic differential equations, capacity and quasi-surely analysis for G-brownian. The theory of nonlinear expectation has been increasingly used in many areas, like finance, econometrics and so on.

- Mathematical Economics

The course mainly introduce the application of mathematical method in economics and describe some common mathematical tools step by step. The main contents of the course include static equilibrium analysis, comparative static analysis, optimization problem and Dynamic Analysis. The course also explain mathematical instrument such as matrix algebra, derivative and differentiation, integral calculus, differential equation and difference equation, optimal control theory.

- Nonparametric and semi-parametric statistics

The aim of this course is to present the statistical and mathematical principles of smoothing with a focus on applicable techniques. The course mainly consists of two parts: non-parametric models and semi-parametric models. The first part focus on flexible regression models including histogram, non-parametric density estimation and non-parametric regression. The second part is devoted to semi-parametric models including semi-parametric and generalized regression models, single index models, generalized partial linear models, additive models and marginal effects, generalized additive models.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

- Top3 mathematics & top8 statistics in Mainland China according to CDR2012 approved by the Chinese Ministry of Education;
(refer to: <http://www.cdgdc.edu.cn/xwyyjsjyxx/xxsbdxz/2012en/index.shtml>)
- Leading scientist: Peng Shige, a world-class mathematician as well as the founder of financial mathematics in China;
(refer to: http://en.wikipedia.org/wiki/Peng_Shige)
- Numerous cooperative financial institutions, e.g. China Financial Futures Exchange, see <http://www.cffex.com.cn/>, Zhongtai Securities (one of the famous Stock Exchanges in China), see <http://www.zts.com.cn/>;
- Conductive and open atmosphere for studying and living;
- First-class financial mathematics faculty;

- First-rate hardware facilities;
- Abundant practice opportunities;
- Brilliant career prospects.

Fees

Registration Fee: 400 RMB Tuition: 32,000 RMB/year Medical Insurance: 800RMB/year

Contact Information

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School of
Email:
Tel:

English Taught Program-PhD Degree Program of Finance

What is the program about?

The program aims to prepare students who are interested in the fields of theory and policy of finance, theory and practice of international finance, financial markets and securities investment, mathematical finance and financial engineering, financial system and financial industrial organizations, monetary finance, theory and practice of insurance. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as theory and policy of finance, theory and practice of international finance, financial markets and securities investment, mathematical finance and financial engineering, financial system and financial industrial organizations, monetary finance, theory and practice of insurance. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- **Advanced Literatures of Institutional Economics**

Based on the improvement of students’ research ability, this course comprehensively introduces the latest literatures in institutional economics, social economics and law economics. Focus will specially be on applying advanced theory to research in China’s localization issues.

- **Games Theory**

This course is for the study of classical non-cooperative Games Theory. It includes 4 chapters. Chapter 1:

Static Games of Complete Information; Chapter 2: Dynamic Games of Complete Information; Chapter 3: Static Games of Incomplete Information; Chapter 4: Dynamic Games of Incomplete Information. The textbook is “Games Theory for Applied Economists” by Robert Gibbons.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O’Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- **Empirical Strategy**

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

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Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- **Development Economics**

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- **Theory and Application of Computable General Equilibrium Model**

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities

in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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Website: www.istudy.sdu.edu.cn

Center for Economic Research
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Tel: +86-531-88364128, +86-531-88363677
website: <http://www.cer.sdu.edu.cn/>

English Taught Program-PhD Degree Program of International Trade

What is the program about?

The School of Economics at Shandong University offers doctoral program, which typically takes four years to complete. This program is open to international students with all instructions in English. Upon the completion of the program, graduates will be awarded a Ph.D. Degree in Finance, International Trade and World Economy.

This program is designed after the cutting-edge curriculums of Ph.D. students from leading universities in the west. With a series of compulsory core courses on economic theory, the program combines elective courses, lectures, seminars and tutorial supervision, which are intended to equip students with main tools in solving theoretical and practical problems and with the creativeness and innovation in economic research. Upon completion of four-year academic training, students are fully prepared for research work, senior management talents and members in academia.

How long does the program last?

The four-year program will be fully taught in English. Upon the completion of the program, graduates will earn a Doctor's Degree.

Who is eligible to apply?

- 1.Applicants must be Non-Chinese citizens in good health, at the age of 18 or above, and possess a valid and private passport;
- 2.Applicants must have Master's degree or above;
 - Applicants who have not yet graduated can obtain a pre-graduation letter from their current educational institution stating their expected date of graduation. If accepted, applicant is required to provide the original graduation certificate upon registration. Otherwise, the acceptance qualification will be cancelled.
- 3.Language Requirement:
 - Applicants with English as native language are exempted from English language certificate.
 - Applicants from non-English speaking countries must provide IELTS (6.5 or above), TOEFL (iBT 90 points or above) or other comparable certification of English proficiency.
 - Applicants who have obtained their highest degree with English as the medium of instruction are exempted from providing language proficiency certification, but proof indicating the language medium is required.

Application Checklist:

- ◇ Application Form
- ◇ Photo Page of Passport
- ◇ Master's Degree / Pre-Graduation Letter
- ◇ Official University/College Transcript
- ◇ Two Letters of Recommendation (from prof/associate prof. or enterprise leaders)
- ◇ Personal Statement

- ✧ Proof of Language Proficiency (if applicable)
- ✧ Proof of Employment (if applicable)
- ✧ Other Attachments (if needed)

How to Graduate?

Credit Requirements

The total credits required for the program are 28.

(5) Course Requirements: Total 22 Credits with 9 courses in the first 3 semesters.

(6) Advanced Lecture: 5 Credits

(7) Seminar: 1 Credit

See curriculum below:

Content			Credits	
Courses	Compulsory Courses	Specialized Courses	18	22
		China Survey		
		Chinese		
	Elective Courses	4		
Advanced Lectures			5	
Seminar			1	

Doctor's Dissertation

Students must finish their dissertation of no less than 100,000 words. The dissertation should be submitted on time and defended during the fourth year.

Doctoral dissertation should under the guidance of the tutor and be independently completed by doctoral students. Doctoral dissertation should be a systematic and complete research on some theory or application in this field.(no less than 100,000 words)It requires the doctoral students to stand in the forefront of academic research, have the courage to explore new fields and unknown fields, the paper must be innovative and has great academic value and social value.

In order to ensure the quality of the paper, the time of writing is generally no less than two years, and student is also required to publish 1 paper in SSCI journals or Web of Science journals (Quartile 1&2) as the first author and taking Shandong University as the first unit.

Program Courses

Specialized Courses

Advanced Microeconomics

This course focuses on the core part of the microeconomics with the emphasis on 1) the development of analytical tools and the understanding of how the theories are constructed and 2) the working and failure cases of the market system. Microeconomic theories cannot be effectively understood without mathematics. Be familiar with calculus and optimization methods. Topics include choice theory, theory of the firm, introduction to general equilibrium and welfare economics, and theory of market structures

policy application and formal techniques.

Advanced Macroeconomics

This course introduces students to basic measures of aggregate-level economic performance such as gross domestic product, personal income, unemployment, the money supply, and the consumer price index. It presents the major (competing) theories of national income and employment, inflation, exchange rates and the balance of trade, as well as the policy recommendations to which the alternative theories give rise.

Econometrics

This course introduces students to single and multiple regression methods for analyzing data in economics and related disciplines. Extensions include regression with panel data, discrete random variables, instrumental variables regression, and regression with time series data. The objective of the course is for the student to learn how to conduct – and how to critique – empirical studies in economics and related fields. The course statistical software is STATA.

Quantitative Methods in Economics

This course covers the basic mathematical techniques required for rigorous study of economics, and it will provide extensive instruction on applications of these techniques to economic problems. Upon successful completion of the course, the student will be able to apply mathematical techniques to problems in advanced microeconomic and macroeconomic theory that appear in typical first-semester Ph.D. courses in good economics graduate programs and to master additional mathematical techniques efficiently and effectively as needed for graduate economics coursework and research. This course is particularly appropriate for students planning to pursue graduate studies in economics or related fields

Highlights of the Program

Students earn the Shandong University Doctor degree in a program that is tailored to the needs of international students, who want to have an in-depth exposure to Chinese economy, Chinese economy reform and practice, and Chinese tradition and modern culture, and who have potential intent to work or advance their career in China in the future.

Fees

Registration Fee: 400 RMB

Tuition: 32,000RMB/year

Medical Insurance: 800RMB/year

Contact Information

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English Taught Program-PhD Degree Program of World Economy

What is the program about?

The program aims to prepare students who are interested in the fields of world economy theory, China-EU economic relations, South East Asia economic relations, and the US economic research. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as world economy theory, China-EU economic relations, South East Asia economic relations, and the US economic research. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

● Advanced Microeconomics

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set

theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

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This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

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- **Development Economics**

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- **Theory and Application of Computable General Equilibrium Model**

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

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English Taught Program-PhD Program of Political Economics

What is the program about?

The program aims to prepare students who are interested in the fields of property rights theory, enterprise theory, corporate governance, law and economics and its application, institutional economics and transitions of China's economic system, methodology of economics, socialism economic theory, financial theory, mathematical finance, financial system, and new classical economics. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as property rights theory, enterprise theory, corporate governance, law and economics and its application, institutional economics and transitions of China's economic system, methodology of economics, socialism economic theory, financial theory, mathematical finance, financial system, and new classical economics. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

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Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

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English Taught Program-PhD Degree Program of Western Economics

What is the program about?

The program aims to prepare students who are interested in the fields of microeconomics theory, consumer behavior, industrial organization, game theory, general equilibrium theory, welfare economics, economic growth, development economics and the development of Chinese economy, economic fluctuation and business cycle, fiscal theory and tax system, finance theory, monetary policy, mathematical finance, financial system and econometrics. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as theory, consumer behavior, industrial organization, game theory, general equilibrium theory, welfare economics, economic growth, development economics and the development of Chinese economy, economic fluctuation and business cycle, fiscal theory and tax system, finance theory, monetary policy, mathematical finance, financial system and econometrics. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

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How to Graduate?

Credit Requirements

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Thesis Requirements

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This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- Experimental Economics

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- Empirical Strategy

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- Energy economics

Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

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Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

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English Taught Program-PhD Degree Program of Population, Resources and Environmental Economics

What is the program about?

The program aims to prepare students who are interested in the fields of resource, environment and sustainable development, environmental economics, environmental pollution and governance, resource consumption and economic growth, human capital theory, research on land property right institution, disaster economics, employment and social security. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as resource, environment and sustainable development, environmental economics, environmental pollution and governance, resource consumption and economic growth, human capital theory, research on land property right institution, disaster economics, employment and social security. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- **Advanced Literatures of Institutional Economics**

Based on the improvement of students' research ability, this course comprehensively introduces the latest literatures in institutional economics, social economics and law economics. Focus will specially be on applying advanced theory to research in China's localization issues.

- Games Theory

This course is for the study of classical non-cooperative Games Theory. It includes 4 chapters. Chapter 1: Static Games of Complete Information; Chapter 2: Dynamic Games of Complete Information; Chapter 3: Static Games of Incomplete Information; Chapter 4: Dynamic Games of Incomplete Information. The textbook is "Games Theory for Applied Economists" by Robert Gibbons.

- Labour Economics

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- Experimental Economics

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O'Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- Empirical Strategy

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- Energy economics

Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate

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Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

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website: <http://www.cer.sdu.edu.cn/>

English Taught Program-PhD Degree Program of Quantitative Economics

What is the program about?

The program aims to prepare students who are interested in the fields of mathematical economics, econometric model and its application, financial econometrics, actuarial insurance. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as mathematical economics, econometric model and its application, financial econometrics, actuarial insurance. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- **Advanced Literatures of Institutional Economics**

Based on the improvement of students’ research ability, this course comprehensively introduces the latest literatures in institutional economics, social economics and law economics. Focus will specially be on applying advanced theory to research in China’s localization issues.

- **Games Theory**

This course is for the study of classical non-cooperative Games Theory. It includes 4 chapters. Chapter 1:

Static Games of Complete Information; Chapter 2: Dynamic Games of Complete Information; Chapter 3: Static Games of Incomplete Information; Chapter 4: Dynamic Games of Incomplete Information. The textbook is “Games Theory for Applied Economists” by Robert Gibbons.

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- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

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English Taught Program-PhD Degree Program of Regional Economics

What is the program about?

The program aims to prepare students who are interested in the fields of urbanization and urban economies, structural theory of space, regional investment and financing. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as urbanization and urban economies, structural theory of space, regional investment and financing. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

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This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

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- **The Forum of Frontier Lecture**

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3 credits for the first course, 2 credits for each course (other courses).

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English Taught Program-PhD Program of Law and Economics

What is the program about?

The program aims to prepare students who are interested in the fields of study on basic theory of law and economics, general theory of department law economic analysis, law and economic analysis on Chinese law and legal institution. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as study on basic theory of law and economics, general theory of department law economic analysis, law and economic analysis on Chinese law and legal institution. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- **Advanced Literatures of Institutional Economics**

Based on the improvement of students’ research ability, this course comprehensively introduces the latest literatures in institutional economics, social economics and law economics. Focus will specially be on applying advanced theory to research in China’s localization issues.

- **Games Theory**

This course is for the study of classical non-cooperative Games Theory. It includes 4 chapters. Chapter 1: Static Games of Complete Information; Chapter 2: Dynamic Games of Complete Information; Chapter 3: Static Games of Incomplete Information; Chapter 4: Dynamic Games of Incomplete Information. The textbook is “Games Theory for Applied Economists” by Robert Gibbons.

- **Labour Economics**

This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- **Experimental Economics**

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O’Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- **Empirical Strategy**

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- **Energy economics**

Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- **Development Economics**

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- **Theory and Application of Computable General Equilibrium Model**

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

Fees

Registration Fee: 400 RMB Tuition: 32,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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Tel: +86-(0)531 88364854
Website: <http://en.sdu.edu.cn/>

Center for Economic Research
Email: cer@sdu.edu.cn
Tel: +86-531-88364128, +86-531-88363677
website: <http://www.cer.sdu.edu.cn/>

English Taught Program-PhD Degree Program of Economics of Language

What is the program about?

The program aims to prepare students who are interested in the fields of theoretical economics of language, applied economics of language. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as theoretical economics of language, applied economics of language. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

- **Advanced Macroeconomics**

This course aims to introduce to students Macroeconomics at an advanced level so as for them to acquire the major theories concerning the central questions of advanced macroeconomics. It provides both an overview of the field for students who will continue their research in macroeconomics and prepares them for more advanced courses and research in macroeconomics and monetary economics. The course covers growth theory, dynamic macroeconomics, business cycle model, behaviors of consumption and investment, labour economics and macroeconomic policies.

- **Advanced Econometrics**

This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

- **Advanced Literatures of Institutional Economics**

Based on the improvement of students’ research ability, this course comprehensively introduces the latest literatures in institutional economics, social economics and law economics. Focus will specially be on applying advanced theory to research in China’s localization issues.

- Games Theory

This course is for the study of classical non-cooperative Games Theory. It includes 4 chapters. Chapter 1: Static Games of Complete Information; Chapter 2: Dynamic Games of Complete Information; Chapter 3: Static Games of Incomplete Information; Chapter 4: Dynamic Games of Incomplete Information. The textbook is “Games Theory for Applied Economists” by Robert Gibbons.

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This course focuses on the classical theories and recent, cutting-edge research in the major areas of modern labour economics. The content includes labour supply and demand, Education and human capital, labour migration, Job search and vacancy analysis, Wage determination and inequality, labour market discrimination, contracts, risk-sharing and incentive, globalization and labour markets, institution and labour market policies, collective bargaining and labour unions, and unemployment.

- Experimental Economics

The experimental course introduces students to experimental designs which predict economic behavior and validate existing economic theory. Students will be exposed to how experimental methodology has been used in development economics, labor economics, and behavioral finance. They will be introduced to the key works of Mathew Rabin, Ted O’Donoghue, Esther Duflo, Daron Acemoglu, John List. Students will be exposed to game theory, social preference theories, time inconsistency theories, self-control problems as well as the use of instrumental variables.

- Empirical Strategy

This course aims to introduce the identification strategy in empirical study to students. Combined with examples in literature in public economics, industrial economics and finance, the course help students to be familiar with the commonly-used methods, such as Instrument Variable method, DID method (Difference in Difference), PSM method (Propensity Score Matching) and RDD (Regression Discontinuity Design).

- Energy economics

Energy economics is a broad scientific subject area which includes topics related to supply and use of energy in societies. Topics include the exploitation, conversion and use of energy, markets for energy commodities and derivatives, regulation and taxation, forecasting, environment and climate, and international trade. Research methodology includes experiments, surveys, econometrics, decomposition, simulation models, equilibrium models, optimization models and analytical models.

- Development Economics

This course is intended as an introduction to the newly emerging field of development economics. Its purpose is to give you both a sense of the frontier research topics and a good command of the tools in the area. Prior knowledge of econometrics is assumed. The content covers some aspects of development, including the institutions, culture, trust, religion, human capital, technology, geographic endowment, ethnic, state capacity, war and conflict, corruption, poverty, inequality, resource allocation, democracy and transformation.

- Theory and Application of Computable General Equilibrium Model

Computable general equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors. A CGE model consists of (a) equations describing model variables and (b) a database consistent with the model equations. The equations tend to be neo-classical in spirit, often assuming cost-minimizing behavior by producers, and household demands based on optimizing behavior. CGE models are widely used in many areas, such as international trade, environmental and energy economics, and global climate changes.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Teaching staffs of the Center for Economic Research possess doctoral degrees from famous universities in China and abroad. Most of them have worked or have had post-doctoral experience in foreign universities for one year or more. Some researches of the center for Economic Research have ranked at the forefront of leading research in China.

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English Taught Program-PhD Degree Program of Industrial Economics

What is the program about?

The program aims to prepare students who are interested in the fields of theory and policy of industrial economics, theory and practice of financial industry, industry planning and study on investment and financing, Studies on regional and urban economies. A variety of English taught courses will be offered to students, including Advanced Microeconomics, Advanced Macroeconomics, Advanced Econometrics, Academic English, the Forum of Frontier Lecture, Game Theory, Financial Economics, Labour Economics, Experimental Economics, Empirical Strategy, Energy Economics, Development Economics, Advanced Literatures of Institutional Economics, Theory and Application of Computable General Equilibrium Model.

How long does the program last?

The four-year PhD programs will be fully taught in English and will focus on several different research areas, such as theory and policy of industrial economics, theory and practice of financial industry, industry planning and study on investment and financing, Studies on regional and urban economies. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in economics or related areas. Candidates who do not meet this criterion may be qualified to apply if relevant credential in postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 23, of which no less than 20 credits are for compulsory (core) courses.

Thesis Requirements

All students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisor to choose a topic and conduct detailed research. Graduates should also be actively engaged in research activities, and strive to publish papers in academic journals.

Program Courses:

Core Courses:

3 credits for each course (first three courses), 2 credits for the fourth course, 5 credits for the last course.

- **Advanced Microeconomics**

This is an advanced course in microeconomics theory. Students will learn the fundamental methods and theories of microeconomics, and be provided with the basic tools and concepts required to understand academic papers at the research frontier of microeconomics theory. Topics to be covered may include set theory, mapping theory, optimizations, consumer choice, demand, firm theory, cooperative and non-cooperative game theory, partial and general equilibrium, and topics in behavioral economics.

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This course will present an advanced treatment of econometric principles of cross-sectional, panel and time-series analysis. Except for concentrating on linear models, some non-linear cases will also be discussed. The course will focus on modern econometric techniques, addressing both technical derivations and practical applications. Applications in the areas of microeconomics, macroeconomics and finance will be considered.

- **Academic English**

This course is for the students to improve their ability to read and understand the English academic papers in economics. It mainly includes about 4 or 5 classical academic papers in economics, for example, “Existence of an Equilibrium for a Competitive Economy” by Arrow and Debreu, “Economic Theory and Mathematics--an Appraisal” by Samuelson, “The Second End of Laissez-Faire” by Iwai, “Human Action” by Ludwig von Mises, etc.

- **The Forum of Frontier Lecture**

This course is mainly about reading and discussing articles published on famous academic journals, and inviting famous scholars to give presentations on the latest development in the fields of microeconomics, macroeconomics, and finance and so on.

Optional Courses:

3 credits for the first course, 2 credits for each course (other courses).

- **Financial Economics – Asset Pricing**

This course offers a comprehensive overview of the classic and current research in theoretical asset pricing. The theory is developed around the concept of a state-price deflator, i.e. stochastic discount factor, which relates the price of any asset to its future (risky) dividends and thus incorporates the adjustment for both time and risk into asset valuation. Under certain market equilibrium conditions, the willingness of any utility-maximizing investor to shift consumption over time defines a SDF which finally leads to the Capital Asset Pricing Model (CAPM). Topics covered include the classical results on single-period, discrete-time, and continuous-time models, as well as various proposed explanations for the equity premium and risk-free rate puzzles.

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Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

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website: <http://www.cer.sdu.edu.cn/>

English Taught Program-PhD Degree Program of Electrical Engineering

What is the program about?

The program is to cultivate students who are interested in the fields of power system and its automation, electrical machinery and electrical apparatus, power electronics and power drives, high voltage and insulation technology, electrical engineering theory and new technology under the background of globalization. A variety of English taught courses are offered to students, including Modern Power System, Modern Power Electronics, Numerical Computation of Electromagnetic Field in Electromagnetic Equipment, Fault Computation and Simulation for UHV Power System, New Principles and Techniques for Power System Protection, Power System Operation and Control, Renewable Energy Technology etc., which aim to train the international candidates to grasp the basic theory of electrical engineering as well as the systematic knowledge in the professional field, moreover, to gain the ability to carry out scientific research independently or to develop career as technical specialist.

How long does the program last?

The four-year PhD programs will be fully taught in English and provide several different research areas, such as Power System and its Automation, Electrical Machinery and Electrical Apparatus, Power Electronics and Power Drives, High Voltage and Insulation Technology, Electrical Engineering Theory and New Technology. Upon the completion of the program, graduates will earn a degree certificate recognized by the Ministry of Education, People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in power system and its automation, electrical machinery and electrical apparatus, power electronics and power drives, high voltage and insulation technology, or electrical engineering theory and new technology. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 14, of which no less than 12 credits are for compulsory (core) courses.

Thesis Requirements The students are required to complete their degree thesis and successfully defend their thesis. The students are required to work closely with their supervisors for a research topic. Graduates should also be actively engaged in research activities, and strive to publish papers in the

academic journals.

Program Courses:

Core Courses:

2 credits for each course

- **Modern Power Systems**

Based on the needs of power system and its automation, this course aims to understand and master the generator, its regulation system and load model; in-depth understanding of transient stability, static stability (low frequency oscillation and sub-synchronous resonance), the concept of voltage stability and the main analytical methods; to understand and master the characteristics and analysis methods of DC transmission; to understand the principle, characteristics and applications of SVC, TCSC, STATCOM and other devices.

- **Modern Power Electronics**

Based on the needs of power electronics and power drives, this course will provide the latest developments and research hotspots of modern power electronics technologies, and let students be familiar with the characteristics and application methods of various new power electronic devices, master the topological structure, working principle and control method of various new power converters and master the dynamic modeling and analysis methods of the converters.

- **Numerical Computation of Electromagnetic Field in Electromagnetic Equipment**

Based on the needs of electrical machinery and electrical apparatus, this course will teach the finite element analysis of electromagnetic devices, and then discuss the force, torque, induced electromotive force, iron loss, motor inductance and other calculation methods.

Optional Courses:

2 credits for each course

- **Fault Computation and Simulation for UHV Power System**

This course is open for doctoral students. The main contents include calculation of overhead transmission line parameters, the basic method of electromagnetic transient numerical calculation, equivalent calculation circuit of coupled inductance, capacitance and resistance elements, etc. This course is fully linked with reality, and clearly introduced scientific research about the failure analysis of the UHV power system in recent years.

- **New Principles and Techniques for Power System Protection**

This course aims to understand the latest developments in power system protection at home and abroad in recent years; to grasp the new principles, improved principle and implementation techniques of relay protection with theoretical significance and practical prospects; master the new principles and new methods of transmission line fault location; master the application and technology of relevant areas in the power system protection; comprehensively improve the students' ability in the analysis and application of the relay protection.

- **Renewable Energy Technology**

The current global energy shortage is becoming more and more serious, so the search and use of new energy is becoming the main task of all countries. This course provides a comprehensive introduction to the current state, implementation principles and techniques of the new and renewable energy sources. It is suitable for Ph.D. study in energy research to enhance students' ability to analyze, judge and solve problems in the current energy environment.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

School of Electrical Engineering of Shandong University which has a long history, was founded in 1946. At present, the school are composed of 7 Institutes, including Institute of Power Systems, Institute of Relay Protection, Institute of Electrical Machinery and Electrical Apparatus, Institute of Power Electronics and Power Drives, Institute of Electrical Theory and New Technology, Institute of High Voltage and Insulation Technology, Institute of Intelligent Grid and Renewable Energy. The school has Key Laboratory of Power System Intelligent Dispatch and Control (Ministry of Education), Global Energy Internet (Shandong) Collaborative Innovation Center, Provincial Key Laboratory of UHV Power Transmission and Transformation Technology and Gas Discharge, Shandong Provincial Engineering Laboratory of Electric Vehicle, and 4 Provincial Engineering Technology Center of Magnetic Suspension Bearing, Permanent Magnet Motor, Magnetic Separation, Power Quality. Moreover, the school has doctorate disciplines of electrical engineering and post-doctoral research grant mobile station. At present, School of Electrical Engineering has 20 PHD supervisors, 64 master supervisors, and more than 80% teachers have a doctor's degree. There are more than 500 doctoral students and master students in the school, some of them are from all around the world. At the same time, the school also has a good partnership and joint training doctoral students with more than a dozen well-known institutions of the United States, Britain, France, Australia, Singapore, Hongkong, etc.

The school has scientific research strength, and made a number of important research results. In recent years, the school has published over 50 monographs, translations, textbooks, etc., and more than 1,500 high-level academic papers in core journals at home and abroad, among of them 660 are accepted by SCI, EI and ISTP, and authorized more than 100 patents. The school has accomplished 6 national key programs of 973 Program, 863 Program, Science and Technology Support Program and other key programs and obtained 5 state-level Invention Award and Technology Progress Award, 30 provincial and ministerial level scientific and technological awards. Through converting the academic research to the social results, the school made a significant contribution for China's economic development and social progress.

Through the academic research, professional practice and student activities, the school develops the students' theoretical and practical ability, and strives to bring the cultivated talents into a dynamic professional theoretical system, strong thinking and practical ability, and high professional practical accomplishment. As a result, the school has training a large number of senior specialized personnel, and made a significant contribution for the development of China's power and related undertakings. including the ex-minister of National Power Industry Dazhen Shi, the current chairman of Global Energy Internet Development Cooperation Organization and the general manager of the State Grid Corporation Zhenya Liu, the honorary president of the State Grid Electric Power Research Institute, the Chinese Academy of Engineering (CAE) academician, the internationally renowned power system automation expert Yusheng Xue, Academician of Chinese Academy of Sciences Jiancheng Fang and other famous alumni.

Fees

Registration Fee: 400 RMB

Tuition: 34000RMB/year

Medical Insurance: 800RMB/year

Contact Information

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Gao Feng Associate Dean, School of Electrical Engineering
Email: fgao@sdu.edu.cn
Tel: +86-531-81696302
website: <http://www.ee.sdu.edu.cn/>

English Taught Program-PhD Degree Program of Information and Communication Engineering

What is the program about?

The program is to prepare students who are interested in the fields of Broadband wireless digital mobile communication, Wireless communication theory and technology, Information and image processing, Spatial information technology, Embedded system design, Biological and medical information processing and application, Cloud computing, big data processing, acoustic communication, and acoustic signal processing. A variety of English taught courses offer to students, including [Applied Functional Analysis II](#) , [Principles of Mobile Communication](#), Next Generation Wireless Communication Systems and Networks, Information Theory and Coding, [Principles and Applications of Embedded System](#), Advanced Programming Technology, Sensor Networks and Internet of Things, and Stochastic Process.

How long does the program last?

The four-year Ph. D programs will be fully taught in English and providing several different research areas, such as Broadband wireless digital mobile communication, Wireless communication theory and technology, Information and image processing, Spatial information technology, Embedded system design, Biological and medical information processing and application, Cloud computing, big data processing, acoustic communication, and acoustic signal processing. Upon the completion of the program, graduates will earn a Doctor of Engineering degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in Physics or Engineering. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 19, of which no less than 17 credits are for compulsory (core) courses (including Advanced Research Seminars, 6 credits).

Thesis Requirements

In the fourth year, the students must finish their Ph.D thesis, and defend it in the eighth term (in mid-May). The students must work closely with their supervisor to define a focused topic and conduct

the research.

Graduation Requirements

Students should also be bold and actively engaged in research activities, and publish at least 2 papers as first author (first affiliation: Shandong University) in relevant journals indexed by SCI or EI (at least one of the papers has to be published in SCI source journals, at least one of the papers is written in English).

Program Courses:

Core Courses:

China Survey

Applied Functional Analysis II

Professional English

Chinese language

Optional Courses:

[Principles of Mobile Communication](#)

Next Generation Wireless Communication Systems and Networks

Information Theory and Coding

[Principles and Applications of Embedded System](#)

Advanced Programming Technology

Sensor Networks and Internet of Things

Modern Circuit Design Theory

Computer Vision

Data Mining

Contemporary Communication Systems (Using Matlab)

Optimization Theory and Application

Digital Image Processing

Video Processing

Radio frequency Communication Device

Stochastic Process

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

The School of Information Science and Engineering was founded in June 2000 when Shandong University merged with Shandong Medical University and Shandong University of Technology, resulting in the emergence of a new, large scale Shandong University with enhanced strength and expanded academic disciplines. The school is the largest in the information area in Shandong Province with more than 150 academic staff members and its achievements are at the highest level in Shandong Province and comparable to excellent schools all over China.

We now have 41 full professors, 58 associate professors and 20 senior engineers, including a strong balance of eminent professors and ambitious young staff. Most of them hold Ph.D. degree and have abroad experiences as visiting professors. Most are qualified to supervise master students and 16 of them

are qualified to supervise Ph.D. candidates. As one of the most important schools with an enrollment of over 2000 undergraduates and more than 400 graduate students pursuing Master and Ph.D. Degrees.

In recent years, there is a growing need for global exchange from our faculties and students alike. In response to this demand, we have been striving to build and widen our international networks, through international academic conference, faculty and student exchange, co-researching and etc. We have forged exchange relationships for both undergraduate and graduate students with more than 17 top universities in the world such as University of Ulm, University of Bremen in Germany, Inha University, Sungkyunkwan University in South Korea, Ritsumeikan University in Japan etc.. We have established scientific research cooperation with nearly 20 universities and institutes worldwide like Technical University Munich, Bremen University in Germany, University of Agder in Norway, Toronto University in Canada, Western Michigan University in the US, Polytechnic University of Catalonia (UPC) in Spain, University of Central Lancashire, Heriot-Watt University in the UK, University of New South Wales in Australia, Claude Bernard University Lyon 1, National Center for Scientific Research in France, and so on.

Our School is now moving back to Qingdao (Tsingtao), where historical impact was made during Shandong University's development. Faced with this unparalleled opportunity, we are welcoming you to join us in building Shandong University's Information Science and Engineering School into an open and global-minded community!

Others

In view of the rapid development of the electronics, optoelectronics and communication industry, the school has also initialized cooperative education and research programs with several national big-name companies as Hisense and Langchao. Advanced training opens up vast employment opportunities for graduates in industries, business and financial institutions, government service, and universities nationwide.

Fees

Registration Fee: 400 RMB Tuition: 34,000RMB/year Medical Insurance: 800RMB/year

Contact Information

International Admission Office
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Website: www.istudy.sdu.edu.cn

School of Information and Communication Engineering
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Tel: +086-532-58630270
website: <http://202.194.15.203:8080/endpoint.site>

English Taught Program-PhD Degree Program of Electronic Science and Technology

What is the program about?

The program is to prepare students who are interested in the fields of Computational Electromagnetics, Optical fiber communication device and optical fiber sensor, Optoelectronic devices and integration, Radio frequency Communication circuits and system design, Integrated Nano device, and Nano memory. A variety of English taught courses offer to students, including Theory and Technology of Optical Waveguide, [Principles and Applications of Embedded System](#), Modern Circuit Design Theory, [Numerical Analysis for Electromagnetic Fields](#), Modern antenna technology, Fiber-optic Communications Systems, Radio frequency Communication Device, Solid State Theory, Physics of Semiconductor Devices, Nanophotonics, and Modern Optical Communication Technology.

How long does the program last?

The four-year Ph. D programs will be fully taught in English and providing several different research areas, such as Computational Electromagnetics, Optical fiber communication device and optical fiber sensor, Optoelectronic devices and integration, Radio frequency Communication circuits and system design, Integrated Nano device, and Nano memory. Upon the completion of the program, graduates will earn a Doctor of Engineering degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in Physics or Engineering. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 18, of which no less than 16 credits are for compulsory (core) courses (including Advanced Research Seminars, 6 credits).

Thesis Requirements

In the fourth year, the students must finish their Ph. D thesis, and defend it in the eighth term (in mid-May). The students must work closely with their supervisor to define a focused topic and conduct the research.

Graduation Requirements

Students should also be bold and actively engaged in research activities, and publish at least 2 papers as first author (first affiliation: Shandong University) in relevant journals indexed by SCI or EI (at least one of the papers has to be published in SCI source journals, at least one of the papers is written in English).

Program Courses:

Core Courses:

Theory and Technology of Optical Waveguide

Professional English

China survey

Chinese language

Optional Courses:

[Principles and Applications of Embedded System](#)

Modern Circuit Design Theory

[Numerical Analysis for Electromagnetic Fields](#)

Modern antenna technology

Fiber-optic Communications Systems

Radio frequency Communication Device

Physics of Semiconductor Devices

Nanophotonics

Modern Optical Communication Technology

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

The School of Information Science and Engineering was founded in June 2000 when Shandong University merged with Shandong Medical University and Shandong University of Technology, resulting in the emergence of a new, large scale Shandong University with enhanced strength and expanded academic disciplines. The school is the largest in the information area in Shandong Province with more than 150 academic staff members and its achievements are at the highest level in Shandong Province and comparable to excellent schools all over China.

We now have 41 full professors, 58 associate professors and 20 senior engineers, including a strong balance of eminent professors and ambitious young staff. Most of them hold Ph.D. degree and have abroad experiences as visiting professors. Most are qualified to supervise master students and 16 of them are qualified to supervise Ph. D. candidates. As one of the most important schools with an enrollment of over 2000 undergraduates and more than 400 graduate students pursuing Master and Ph.D. Degrees.

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University Munich, Bremen University in Germany, University of Agder in Norway, Toronto University in Canada, Western Michigan University in the US, Polytechnic University of Catalonia (UPC) in Spain, University of Central Lancashire, Heriot-Watt University in the UK, University of New South Wales in Australia, Claude Bernard University Lyon 1, National Center for Scientific Research in France, and so on.

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English Taught Program-PhD Degree Program of Optical Engineering

What is the program about?

The program is to prepare students who are interested in the fields of Advanced laser technology and application, Nonlinear Optics, Optical communication device and sensing technology, Information optics, Optoelectronic material and device, Quantum optics, quantum information, and Precision optical instrument. A variety of English taught courses offer to students, including Modern Optics, Advanced Electromagnetic Theory, Theory of Laser, Physics of Semiconductor Devices, Advanced Optics, Optoelectronics I , Nonlinear Optics, Solid-state Laser Engineering, Nanophotonics, and Strong Field Nonlinear Optics.

How long does the program last?

The four-year Ph. D programs will be fully taught in English and providing several different research areas, such as Advanced laser technology and application, Nonlinear Optics, Optical communication device and sensing technology, Information optics, Optoelectronic material and device, Quantum optics, quantum information, and Precision optical instrument. Upon the completion of the program, graduates will earn a Doctor of Engineering degree certificate recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in Physics or Optics. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits for the program are no less than 19, of which no less than 17 credits are for compulsory (core) courses.

Thesis Requirements

In the fourth year, the students must finish their Ph.D thesis, and defend it in the eighth term (in mid-May). The students must work closely with their supervisor to define a focused topic and conduct the research.

Graduation Requirements

Students should also be bold and actively engaged in research activities, and publish at least 2 papers as first author (first affiliation, Shandong University) in relevant journals indexed by SCI or EI (at least one

of the papers has to be published in SCI source journals, at least one of the papers is written in English).

Program Courses:

Core Courses:

Theory of Laser

Professional English

China Survey

Chinese language

Optional Courses:

Advanced Electromagnetic Theory

Theory of Laser

Physics of Semiconductor Devices

Advanced Optics

Nonlinear Optics

Solid-state Laser Engineering

Nanophotonics

Strong Field Nonlinear Optics

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English Taught program-PhD Degree Program of Condensed Matter Physics

What is the program about?

The program aims to recruit students who are interested in Condensed Matter Physics, which includes Dielectric Physics, Soft Condensed Matter Physics, Magnetism and Spintronics, as well as Crystal Physics, etc. This program provides students with ability to conduct scientific research and teaching independently in universities or research institutions. Students graduate from this program will also possess the ability to innovate in industrial research and development .

How long does the program last?

The normal period is 4 years for a full time student to accomplish Ph.D study. The duration of the study is between 3 to 7 years.

Who is eligible to apply?

Applicants should have a master degree in Physics or Materials Science. Admission of candidates who do not meet this criterion may be approved if evidence of relevant graduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

The total credits required to complete the program are no less than 14 credits, of which no less than 10 credits are for compulsory (core) courses.

Thesis Requirements

Students are required to complete their degree thesis under the supervision of their supervisor. Before submission of the degree thesis, students need to publish at least two papers in journals indexed as SCI. Student should be the first author of the papers with Shandong University as the first affiliation. Successful students also need to pass the oral thesis defense.

Course Projects:

j. Physics of Dielectrics

Research mainly focuses on the Physics of Functional Dielectrics, including Piezoelectrics and Ferroelectrics, Thermoelectric Materials, as well as Varistors, Giant Dielectric Constant Materials and

Conductive Ceramics. Currently study of Lead Free Piezoelectric Ceramics and Thermoelectric Oxides/alloys are under granted.

- Theory of Condensed Matter

Current research is focused on the Electrical, Magnetic and Optical Properties of the Organic Solids, including Organic Spintronics, Molecular Electronics, Organic Optoelectronic Devices, and Transport Properties of the Nanostructures, etc.

- Magnetism and Spintronics

Properties of Ferromagnetic Semiconductors, Spin Injection Hetero-junctions of Semiconductors, Multiferroic Materials, Nano-magnetic Materials, Shape Memory Alloys, Permanent Magnets, Soft-magnetic Materials and Magnetic Recording Materials are investigated. The Micromechanisms of Ferromagnetism, Magneto-resistance and Anomalous Hall Effects are revealed.

- Interaction Between Laser Beam/particle and Material

Research mainly focuses on Applications of Low Energy Accelerator in Photonic Physics, Laser/ion Beam Interactions with Solid State Materials and so on.

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Condensed Matter Physics is now the key discipline strongly supported by "Project 211" and "Project 985", and it was initially formed by combining Magnetism and Solid State Physics, both of which had offered Ph.D programs for a long time. In addition, the research of Piezoelectric Crystal and Magnetism at Shandong University has a long history and has gained high reputation.

The research mainly focuses on Theory of Condensed Matter, Magnetism and Spintronics, Dielectric Physics, and Applications of Ion Beam. In the last few years, more than 30 research projects are carried out, which include the National High Tech Fund ("863 project"), National Basic Research Fund ("973 project"), and National Nature Science Fund. About 20 Ph.D students and 40 master students graduate each year.

Fees

Registration Fee: 400 RMB Tuition: 34,000 Medical Insurance: 800RMB/year

Contact Information

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English Taught Program-PhD Degree Program of Microbiology

What is the program about?

The mission of the Ph.D. program in Microbiology in the School of Life Sciences is to train its students to become highly competent professionals in Microbiology research and its related industries.

How long does the program last?

For full-time Ph.D. students, the regular duration of the program is four years. Early graduation can be granted for students who have fulfilled the requirements of graduation and also have stayed in the program for at least three years.

Who is eligible to apply?

All students who have got their Master's Degree are eligible to apply.

Program Structure

Core Courses

Seminars on Advanced Science

Proposal training

Progress in Microbiology

Reading and literature review

Optional Courses

Technical Writing in English

Topics in Plant Molecular Genetics

Evolution biology

Credit Requirements

The total credits should be no less than 14, including 12 credits on compulsory courses and 2 credits on Elective courses. A dissertation course includes extracurricular literature reading.

Thesis Requirements

The doctoral degree dissertation should be written following "The Uniform Requirement of Format for Graduate-level Theses in Shandong University". The length of the doctoral degree dissertation should be between 30,000 and 100,000 words. The length of the abstract should be above 3,000 words. The dissertation should have reliable data, should be written professionally, should be written in smooth language, and should bear appropriate and reasonable analysis.

Graduation Requirements

Graduation requires the publication of either one paper ranked in or above zone 2 according to The Chinese Academy of Science SCI Journal Ranking Table or two papers categorized as SCI. In either case, the PhD student serves as the independent first author (i.e. excluding co-first authorship).

Scholarships

A list of scholarships for prospective and current students can be found at: www.istudy.sdu.edu.cn

Highlights of the Program

Highlights of the Programs in Microbiology and microbial technology studies at Shandong University are characterized by: (1) microbial resources and associated applied & basic researches; (2) genomic and metabolic engineering; and (3) environment and industry associated microbial technology.

Fees

Registration Fee: 400 RMB Tuition: Tuition: 34,000RMB/year Medical Insurance: 800RMB/year

Contact Information

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<http://www.lifesci.sdu.edu.cn/index.aspx>

English Taught Program-PhD Degree Program of Financial Mathematics and Financial Engineering

What is the program about?

The goal of this program is to develop person with ability to conduct scientific research or work in the areas of financial mathematics. Students should build solid theoretical foundation and systemic professional knowledge. A variety of courses have been introduced to students, including nonlinear stochastic analysis, backward stochastic differential equations and application, non-parametric and semi-parametric statistics etc., which will also cover information related to financial mathematics theory and application.

How long does the program last?

The length of this doctor program is 4 years and the program provides several different research concentrations, like financial mathematics and financial engineering, quantitative finance and risk measurement, backward stochastic differential equation and nonlinear expectations, stochastic calculus for finance, econometrics and financial statistics. Upon the completion of the program, graduates will earn a doctor's Degree of Science or Economics, recognized by the Ministry of Education of the People's Republic of China.

Who is eligible to apply?

Applicants should have a Master's degree in mathematics. Admission of candidates who do not meet this criterion may be approved if satisfactory evidence of postgraduate study, research or professional experience can be provided.

How to Graduate?

Credit Requirements

During this program at least 13 credits are needed among which not less than 12 credits are for degree courses.

Publication Requirements

One academic paper should be published in SCI or EI source during the doctor period. Each paper is only valid for one doctoral student, and need the signatures of tutors and college. Shandong University should be the author's affiliation.

Program Courses:

Core Courses:

3 credits for each course

- **Nonlinear Stochastic Analysis**

This course focuses on the basic knowledge of nonlinear stochastic analysis. Students who take this course should have fundamental knowledge of backward stochastic differential equations. The main contents of this course include and theory of backward stochastic differential equations. The course also covers the application of nonlinear stochastic analysis in dynamic measurement and control of financial risk.

- **Nonparametric and semiparametric statistics**

The aim of this course is to present the statistical and mathematical principles of smoothing with a focus on applicable techniques. The course mainly consists of two parts: non-parametric models and semi-parametric models. The first part focus on flexible regression models including histogram, non-parametric density estimation and non-parametric regression. The second part is devoted to semi-parametric models including semi-parametric and generalized regression models, single index models, generalized partial linear models, additive models and marginal effects, generalized additive models.

Optional Courses:

2 credits for each course

- **Stochastic Calculus**

The object of this course is to make students learn how to do computational work in stochastic progress. Students who take this course should have a mathematics background consists of calculus and calculus-based probability. The course includes a self-contained treatment of the probability theory needed for stochastic calculus, including Brownian motion and its properties. Advanced topics include foreign exchange models, risk-neutral pricing, exotic options and jump-diffusion processes.

- **Financial Mathematics Theory and Application**

This course aims to make students master the mathematical theory in solving financial problem. Students will be introduced to the knowledge related to pricing of derivatives. The course introduces Black-Scholes pricing formula and Mean-Variance approach of Markowitz for portfolio optimization. The course also includes topics of interest rate and interest rate derivatives, including Optimal Trading Strategies, Credit Scoring Models and Portfolio Credit Risk Management.

- **Nonlinear Expectations**

The course aims to introduce a wide knowledge of nonlinear expectation and its application, especially in finance with uncertainty. This course is one of the characteristic courses in institute for financial studies, which is proposed by professor Peng shige. The main contents of this course conclude sub-linear expectation and risk measures, law of large numbers and central limit theorem, G-brownian motion and Ito's integral, G-martingales and Jensen's inequality, stochastic differential equations, capacity and quasi-surely analysis for G-brownian. The theory of nonlinear expectation has been increasingly used in many areas, like finance, econometrics and so on.

- **Backward Stochastic Differential Equations and Application**

This course aims to make sure the students have good knowledge of backward stochastic differential equation theory and its applications. This course mainly includes backward stochastic differential equation and nonlinear expectations. The concrete contents are brownian filtration consistent evaluations

and expectations, backward stochastic differential equations: g-evaluations and g-expectations, dynamic risk measures, numerical solution of BSDEs.

Scholarships

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Highlights of the Program

- Top3 mathematics & top8 statistics in Mainland China according to CDR2012 approved by the Chinese Ministry of Education;
(refer to: <http://www.cdgd.edu.cn/xwyyjsjyxx/xxsbdxz/2012en/index.shtml>)
- Leading scientist: Peng Shige, a world-class mathematician as well as the founder of financial mathematics in China;
(refer to: http://en.wikipedia.org/wiki/Peng_Shige)
- Numerous cooperative financial institutions, e.g. China Financial Futures Exchange, see <http://www.cffex.com.cn/>, Zhongtai Securities (one of the famous Stock Exchanges in China), see <http://www.zts.com.cn/>;
- Conductive and open atmosphere for studying and living;
- First-class financial mathematics faculty;
- First-rate hardware facilities;
- Abundant practice opportunities;
- Brilliant career prospects.

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