



DREXEL UNIVERSITY

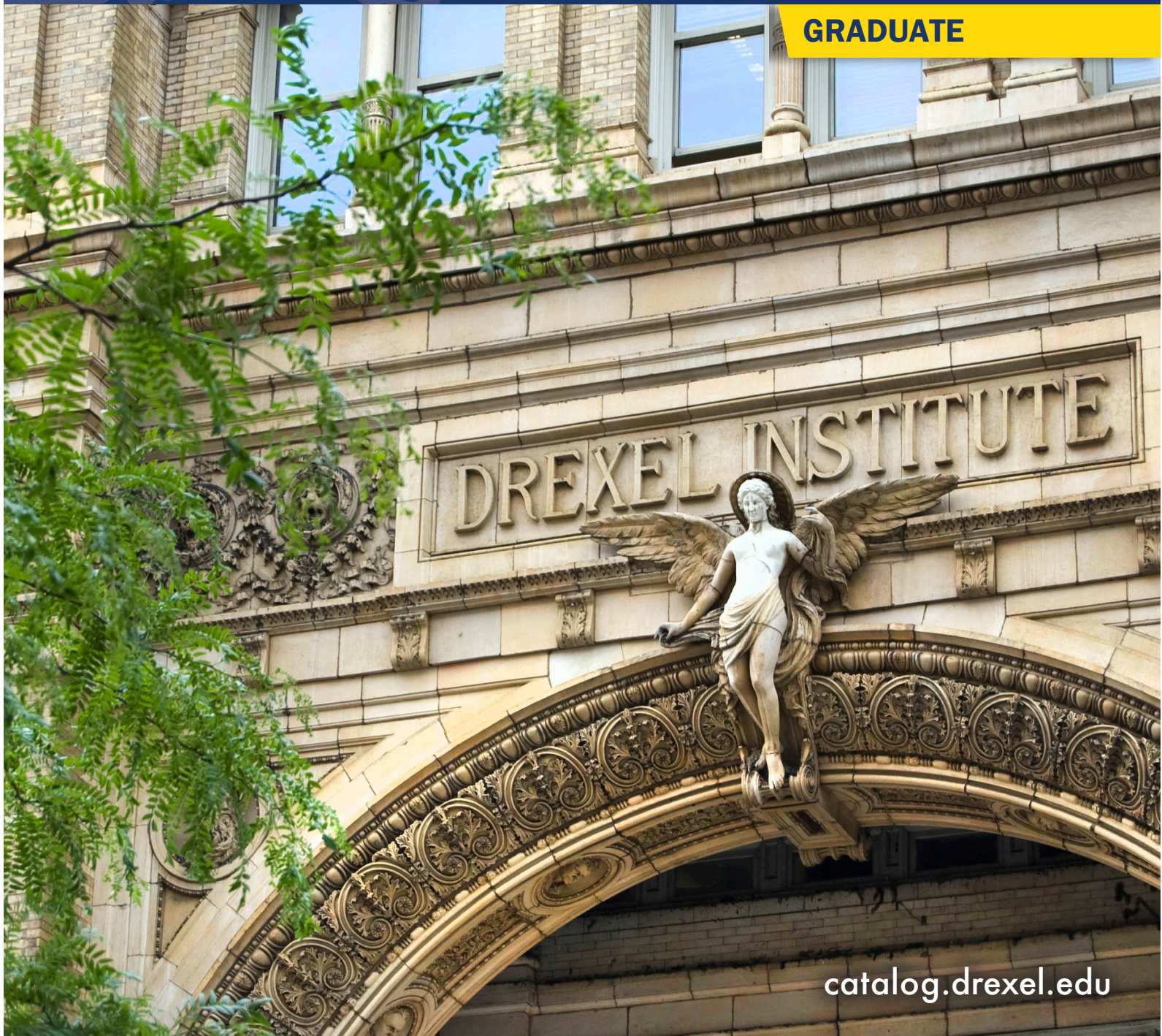
School of
Economics

LeBow College of Business

CATALOG

2020-2021

GRADUATE



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Table of Contents

- LeBow College of Business: School of Economics 2
 - Economics 2
 - Economics 5
 - Economics and Computer Science 7
 - Economic Data Analysis 8
 - Graduate Minor in Economics 8
- Index 9

LeBow College of Business: School of Economics

The LeBow College of Business celebrated its strengths in economics teaching and research by elevating its economics department into a School of Economics. The School of Economics continues LeBow's commitment to offering a curriculum that is current and challenging and to conducting research that aligns with business trends and informs policy makers.

Economics is at the root of business decisions, government policy making and global relations. As a course of study, it can lead to diverse career opportunities. A degree in economics provides students with a robust understanding of the workings of the market system, major economic institutions, economic policy, and development. The School of Economics boasts an award-winning faculty who are leading researchers and dedicated teachers. The world-renowned faculty members take a hands-on approach to teaching, research and mentoring students.

Majors

- Economics (MSECON) (p. 2)
- Economics (PhD) (p. 5)
- Economics and Computer Science (MSECCS) (p. 7)

Minors

- Economic Data Analysis (p. 8)
- Economics (p. 8)

Economics

Major: Economics

Degree Awarded: Master of Science in Economics (MSECON)

Calendar Type: Quarter

Total Credit Hours: 45.0

Classification of Instructional Programs (CIP) code: 45.0603

Standard Occupational Classification (SOC) code: 19-3011

About the Program

The Master of Science in Economics at Drexel University integrates training in economic theory, quantitative methods, and applied market and policy analysis. It prepares students for a career in industry, consulting, the financial sector, government, or international organizations. The program also provides knowledge and analytical skills necessary for students wishing to pursue a PhD degree in economics, business, public health, public policy, or other related areas.

Additional Information

For more information about the program, contact the School of Economics (<https://www.lebow.drexel.edu/faculty-and-research/disciplines/economics/>).

Admission Requirements

The LeBow College of Business: School of Economics seeks applicants with exceptional ability and motivation. Students who hold a bachelor's degree either in economics or another discipline may apply to the MS program. All courses in the program expect a preparation of at least principles of economics and basic statistics. Students who lack some part of this preparation may be considered for admission conditional on their

completing the appropriate undergraduate courses as non-matriculated students during the summer term before they begin the program in the fall.

In reviewing an applicant's credentials, the faculty will consider the following factors:

- **Prior Academic Accomplishments:** The faculty will examine all course work taken prior to application, paying particular attention to the specific courses that have been completed. Applicants should have attained a minimum grade point average of 3.0 (on a 4.0 scale) for all undergraduate course work completed.
- **Graduate Record Examination (GRE) or Graduate Management Aptitude Test (GMAT):** Applicants are required to submit GRE or GMAT scores. Scores of more than five years old are not accepted.
- **Test of English as a Foreign Language (TOEFL):** Applicants whose native language is not English and who have not already received a degree from a U.S. university must also submit scores from the Test of English as a Foreign Language (TOEFL).
- **Personal Statement/Essay:** Each applicant must submit a personal statement. The personal statement should explain the applicant's educational and personal experiences that have influenced the decision to pursue an MS and should discuss the candidate's career plans and goals.
- **Letters of Recommendation:** Two letters of recommendation must be submitted in support of the application. Applicants are strongly encouraged to seek recommendations from academics or other professionals who can assess the applicant's likelihood of success in the MS program.

Admission Procedures

The MS in Economics program admits students each fall. To be considered for admission, the completed application must be received by the LeBow College of Business Office of Graduate Admissions. Admissions are considered on a rolling basis and will remain open until all available slots are filled. It is the applicant's responsibility to ensure that all transcripts, test scores and letters of recommendation, as well as the application form and the personal statement, are received by LeBow College Business, School of Economics.

Graduate Assistantships and Financial Aid

Financial assistance for the MS program may be available on a limited basis to highly qualified candidates. Research assistantships and Teaching assistantships may be also be available on a limited basis for highly qualified candidates.

To obtain an application, please contact:

Graduate Admissions Office
Bennett S. LeBow College of Business
Drexel University
3141 Chestnut Street
Philadelphia, PA 19104-2875
215.895.6804
msecon@lebow.drexel.edu

Degree Requirements

Core Requirements

Select one course from each of the following sets:

ECON 540 Intro to Econometrics and Data Analysis
or STAT 610 Statistics for Business Analytics

or STAT 931	Statistics for Economics	
ECON 548	Mathematical Economics	3.0
or ECON 902	Mathematical Economics	
ECON 550	Econometrics	3.0
or ECON 940	Econometrics I	
ECON 560	Time Series Econometrics	3.0
or ECON 941	Econometrics II	
ECON 610	Microeconomics	3.0
or ECON 910	Advanced Microeconomics I	
ECON 614	Macroeconomics	3.0
or ECON 920	Advanced Macroeconomics I	
Economics electives *		
Complete 18.0 additional credits from the following:		18.0
ECON 601	Managerial Economics	
ECON 616	Public Finance and Cost Benefit Analysis	
ECON 630	International Economics	
ECON 631	International Macroeconomics	
ECON 634	History of Economic Analysis	
ECON 639	Applied Industrial Analysis	
ECON 644	Trade Policy: Theory and Evidence	
ECON 650	Business & Economic Strategy: Game Theory & Applications	
ECON 661	Health Economics	
ECON 662	Economic Analysis of Health Systems	
ECON T680	Special Topics in ECON	
ECON 700	Economics Seminar	
ECON 902	Mathematical Economics	
ECON 910	Advanced Microeconomics I	
ECON 911	Advanced Microeconomics II	
ECON 920	Advanced Macroeconomics I	
ECON 921	Advanced Macroeconomics II	
ECON 925	Macroeconomic Dynamics	
ECON 940	Econometrics I	
ECON 941	Econometrics II	
ECON 942	Applied Microeconometrics	
ECON 950	Industrial Organization I	
ECON 951	Industrial Organization II	
ECON 959	Industrial Organization Seminar	
ECON 960	International Trade	
ECON 961	Empirical International Trade	
ECON 962	Open Economy Macroeconomics	
ECON 969	International Trade Seminar	
ECON 979	Open Economy Macro Seminar	
ECON 980	Game Theory	
INTB 632	Economic Analysis of Multinational Corporations	
Business electives		
Complete 6 additional credits from the list of Economics electives or the list below:		6.0
BLAW 620	Legal Aspects of Employment	
BUSN 501	Measuring and Maximizing Financial Performance	
FIN 601	Corporate Financial Management	
FIN 602	Advanced Financial Management	
FIN 622	Financial Institutions & Markets	
FIN 635	Entrepreneurial Finance	
FIN 640	Mergers and Acquisitions	
FIN 648	International Financial Management	
MGMT 602	Innovation Management	
MKTG 630	Global Marketing	
OPR 601	Managerial Decision Models and Simulation	
OPR 620	Operations Research I	
OPR 622	Operations Research II	
OPR 624	Advanced Mathematical Program	
Experiential Learning Requirement		3.0
BUSN 615	Graduate Internship	

INTB 790	International Business Seminar and Residency	
MGMT 715	Business Consulting	
Total Credits		45.0

* Students who complete ECON 911, ECON 921 and ECON 941 may take the following courses during their second year provided they have the required prerequisites and approval from the Program Coordinator: ECON 925, ECON 942, ECON 950, ECON 951, ECON 959, ECON 960, ECON 961, ECON 962, ECON 969, ECON 979

Sample Plan of Study

First Year								
Fall	Credits	Winter	Credits	Spring	Credits	Summer	Credits	
ECON 540	3.0	ECON 550	3.0	ECON 560	3.0	VACATION		
ECON 548	3.0	Electives	6.0	Electives	6.0			
ECON 610	3.0							
		9			9			0

Second Year								
Fall	Credits	Winter	Credits	Spring	Credits	Summer	Credits	
Electives	9.0	ECON 614	3.0					
		Electives	6.0					
		9			9			

First Year (Part-Time)								
Fall	Credits	Winter	Credits	Spring	Credits	Summer	Credits	
ECON 540	3.0	ECON 550	3.0	ECON 560	3.0	Electives	6.0	
ECON 548	3.0	Elective	3.0	Elective	3.0			
		6			6			6

Second Year (Part-Time)								
Fall	Credits	Winter	Credits	Spring	Credits	Summer	Credits	
ECON 610	3.0	ECON 614	3.0	Electives	6.0	Elective	3.0	
Elective	3.0	Elective	3.0					
		6			6			3

Total Credits 45

Centers and Facilities

This marriage of academic rigor and practical applications can also be seen in the development of the College's Centers of Excellence. Centers of Excellence are catalysts for research and innovation, think tanks for nationally significant trends and issues, and incubators for opportunities in business and integration among disciplines. LeBow's Centers of Excellence provide students with meaningful experiential learning and impact the performance of business in our region and around the world. As part of the curriculum, Drexel LeBow MBA students will take courses which reside in the centers and will see firsthand how practical learning is applied.

The Centers are:

- Sovereign Institute for Strategic Leadership (<https://www.lebow.drexel.edu/faculty-and-research/centers/>)
- Center for Corporate Governance (<https://www.lebow.drexel.edu/faculty-and-research/centers/corporate-governance/>)
- Dana and David Dornsife Center for Experiential Learning (<https://www.lebow.drexel.edu/about/experiential-learning/>)

Facilities

LeBow College of Business opened its 12-story, 177,500-square-foot home, Gerri C. LeBow Hall in September 2013. Located in the heart of Drexel University campus, it forms a gateway to Drexel and serves as a backdrop to the historic statue of A.J. Drexel (Moses Ezekiel, 1904).

The building's organization unites the school's various constituencies around a five-story-high atrium ringed by 15 classrooms of varying sizes and configurations, including a finance trading lab. The atrium is immediately accessible from main entrances at the three corners of the building. An open stair within the atrium leads to a 300-seat auditorium, 100-seat lecture hall, and a behavioral studies lab one floor below. Other amenities consist of 19 collaboration rooms, 3,500 square feet of student lounges and quiet study areas, a bank of four elevators and full ADA accessibility, and an event space with catering capacity. The building's upper floors contain faculty and staff offices interspersed with seminar and conference rooms.

Gerri C. LeBow Hall brings together faculty, students, and staff in a state-of-the-art building on the University City campus. Please visit the LeBow College of Business webpage (<http://www.lebow.drexel.edu/about/campuses/philadelphia/location/gerri-c-lebow-hall/>), the Behavioral Lab webpage (<https://www.lebow.drexel.edu/about/campuses/location/behavioral-lab/>), the Finance Trading Lab webpage (<https://www.lebow.drexel.edu/about/campuses/location/finance-trading-lab-and-bloomberg-terminal-room/>), and the SAP Next-Gen webpage (<https://www.lebow.drexel.edu/about/campuses/location/next-gen-lab/>) to learn more about Gerri C. LeBow Hall.

School of Economics Faculty

Marco Airaud, PhD (*University of Pennsylvania Philadelphia*). Associate Professor. Computational economics, international economics, macroeconomics and monetary economics.

Patricia Awerbuch, MBA (*Drexel University*). Associate Clinical Professor. Distance learning, environmental economics.

Richard Barnett, PhD (*University of Minnesota*). Clinical Professor. Economic theory, macroeconomics.

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Mian Dai, PhD (*Northwestern University*). Associate Professor. Industrial Organization.

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Mark Stehr, PhD (*University of California at Berkeley*) *Director School of Economics*. Professor. Health economics; health behaviors; public finance; public policy.

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Andrew G. Verzilli, PhD (*Boston College*). Professor Emeritus. Teaching effectiveness in economics; economics and financial history.

Chiou-shuang Yan, PhD (*Purdue University*). Professor Emeritus. International economics, input-output analysis.

Economics

Major: Economics

Degree Awarded: Doctor of Philosophy (PhD)

Calendar Type: Quarter

Total Credit Hours: 60.0 (Post-Master's degree) or 90.0 (Post-Bachelor's degree)

Classification of Instructional Programs (CIP) code: 45.0603

Standard Occupational Classification (SOC) code: 19-3011

About the Program

Drexel's PhD program in Economics prepares economists for academic research as well as careers in government or industry by providing a solid background in economic theory, quantitative analysis, and analytical tools at the advanced level. Each year a relatively small number of PhD students are accepted into the program, which allows for a collegial environment where the PhD students interact with faculty on a daily basis. Requirements for the MS in Economics program are satisfied if the coursework associated with the first and second years of the PhD program are complete.

The PhD program in Economics offers three fields of study:

- Industrial Organization
- International Trade
- Open Economy Macroeconomics

The PhD program in Economics is also particularly strong in applied microeconometrics.

Students typically complete their coursework in two years and the PhD degree in five. Students work as research and teaching assistants under the supervision of a faculty member. After their second year, students can teach independently.

Additional Information

More information can be found online at the PhD program in Economics (<https://www.lebow.drexel.edu/academics/doctorate/phd-programs/>) page as well as in the LeBow College of Business LeBow PhD Handbook (<https://www.lebow.drexel.edu/sites/default/files/1457548154-lebowphdhandbook2016.pdf>).

To apply and for application information please check online at the LeBow PhD Admissions (<https://www.lebow.drexel.edu/admissions/doctorate-admissions/phd-admissions/>) webpage.

Questions should be addressed to lebowphd@drexel.edu.

Admission Requirements

The LeBow College of Business: School of Economics seeks applicants with exceptional ability and motivation. For the PhD, the School places emphasis on applicants who can provide evidence of strong potential in a research-oriented program. In general, prior training at either the undergraduate or graduate level in economics and mathematics is strongly encouraged. All courses in the program expect a preparation of at least principles of economics and basic statistics. Students who lack some part of this preparation may be considered for admission conditional on their completing the appropriate undergraduate courses as non-matriculated students during the summer term before they begin the program in the fall.

Admission is competitive and highly selective.

In reviewing an applicant's credentials, the faculty will consider the following factors:

- **Prior Academic Accomplishments:** The faculty will examine all course work taken prior to application, paying particular attention to the specific courses that have been completed. Applicants should have attained a minimum grade point average of 3.0 (on a 4.0 scale) for all undergraduate course work completed. They also should have attained a minimum 3.3 average for any graduate-level course work taken. The faculty generally expects applicants to demonstrate a substantially higher level of accomplishment than these minimum requirements. A master's degree is not a requirement.
- **Graduate Record Examination (GRE):** Applicants are required to submit GRE scores. GRE scores are not accepted if they are more than five years old.
- **Test of English as a Foreign Language (TOEFL):** Applicants whose native language is not English and who have not already received a degree from a U.S. university must also submit scores from the Test of English as a Foreign Language (TOEFL).
- **Personal Statement/Essay:** Each applicant must submit a personal statement. The personal statement should explain the applicant's educational and personal experiences that have influenced the decision to pursue a PhD and should discuss the candidate's career plans and goals. The faculty are especially interested in learning about an applicant's prior research experience and the commitment to future research in the applicant's area of specialization.
- **Letters of Recommendation:** Two letters of recommendation must be submitted in support of the application. Applicants are strongly encouraged to seek recommendations from academics or other professionals who can assess the applicant's likelihood of success in a research-oriented PhD program.

Admission Procedures

The PhD Programs in Economics admits students each fall. To be considered for admission, the completed application must be received by the LeBow College of Business Office of Graduate Admissions no later than **January 15th**. It is the applicant's responsibility to ensure that all transcripts, test scores and letters of recommendation, as well as the application form and the personal statement, are received by Drexel University no later than **January 15th**.

Assistantships and Financial Aid

The LeBow College of Business strives to provide graduate assistantships to all entering PhD students. Each applicant to the PhD program is automatically considered for a graduate assistantship as well as for admission into the program. First-year graduate assistants are assigned to work with a faculty member on research activities. During the second and subsequent years, graduate assistants are generally assigned a combination of teaching and research responsibilities. Assistants receive a stipend and 27.0 credits of tuition remission per academic year. Doctoral students who are making satisfactory progress toward the degree can expect to be provided with an assistantship for at least four years.

Degree Requirements

The PhD in Economics program prepares economists for careers in research, teaching, business, and government. It is designed to provide students with not only a broad understanding of modern economics, but also the opportunity to conduct high quality research in a number

of specific fields of study including industrial organization, international economics, and health economics.

In the second year of study, the PhD in Economics offers three fields of specialization: industrial organization, international trade, and open economy macroeconomics. Students complete courses in two of these fields of specialization.

Curriculum

60.0 credits (Post-Master's degree)

90.0 credits (Post-Bachelor's degree)

- 27.0 credits of first year core courses
- 18.0 credits of economics field requirements
- 15.0 credits (minimum) of dissertation research
- 30.0 additional dissertation research credits for students without a Master's degree

Core Courses *

ECON 902	Mathematical Economics	3.0
ECON 910	Advanced Microeconomics I	3.0
ECON 911	Advanced Microeconomics II	3.0
ECON 920	Advanced Macroeconomics I	3.0
ECON 921	Advanced Macroeconomics II	3.0
ECON 940	Econometrics I	3.0
ECON 941	Econometrics II **	3.0
ECON 942	Applied Microeconometrics	3.0
ECON 980	Game Theory	3.0
STAT 931	Statistics for Economics	3.0

Fields of Specialization 18.0

Student are required to complete the coursework for at least two of the following fields/sequences:

Industrial Organization

ECON 950	Industrial Organization I
ECON 951	Industrial Organization II
ECON 959	Industrial Organization Seminar

International Trade

ECON 960	International Trade
ECON 961	Empirical International Trade
ECON 969	International Trade Seminar

Open Economy Macroeconomics

ECON 925	Macroeconomic Dynamics	
ECON 962	Open Economy Macroeconomics	
ECON 979	Open Economy Macro Seminar	
ECON 998	Dissertation Research in Economics	42.0

Total Credits 90.0

* First Year Examination: After the completion of the core coursework, students are examined on their competence in the core material and their readiness to proceed.

** Taken in the second year.

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The building's organization unites the school's various constituencies around a five-story-high atrium ringed by 15 classrooms of varying sizes and configurations, including a finance trading lab. The atrium is

immediately accessible from main entrances at the three corners of the building. An open stair within the atrium leads to a 300-seat auditorium, 100-seat lecture hall, and a behavioral studies lab one floor below. Other amenities consist of 19 collaboration rooms, 3,500 square feet of student lounges and quiet study areas, a bank of four elevators and full ADA accessibility, and an event space with catering capacity. The building's upper floors contain faculty and staff offices interspersed with seminar and conference rooms.

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Chiou-shuang Yan, PhD (*Purdue University*). Professor Emeritus. International economics, input-output analysis.

Economics and Computer Science

Major: Economics and Computer Science

Degree Awarded: Master of Science in Economics & Computer Science (MSECCS)

Calendar Type: Quarter

Total Credit Hours: 45.0

Classification of Instructional Programs (CIP) code: 45.0603
Standard Occupational Classification (SOC) code: 19-3011

About the Program

Advanced computing is disrupting the economy. Markets are increasingly moving to online platforms and machine learning and algorithms are replacing people in the provision of goods and services. Businesses and governments need leaders who understand the computer science that powers these new systems and who can also use economic theory and intuition to help design them.

The Drexel LeBow MS in Economics & Computer Science degree serves this need by combining training in advanced computation, data analysis, and economics to prepare students for careers at the interconnection of these two fields.

Additional Information

For more information about the program, contact the School of Economics (<https://www.lebow.drexel.edu/faculty-and-research/disciplines/economics/>).

Admission Requirements

- Bachelor's degree
- GRE or GMAT
- Two letters of recommendation
- Statement of purpose

For more information, please contact Lori Miceli or call 215-895-0975.

Degree Requirements

Economics Requirements

ECON 540	Intro to Econometrics and Data Analysis	3.0
or STAT 610	Statistics for Business Analytics	
ECON 548	Mathematical Economics	3.0
ECON 550	Econometrics	3.0
ECON 560	Time Series Econometrics	3.0
ECON 610	Microeconomics	3.0
ECON 614	Macroeconomics	3.0
ECON 700	Economics Seminar	3.0

Computer Science Requirements

Select six of the following courses: *		18.0
CS 500	Fundamentals of Databases	
CS 510	Introduction to Artificial Intelligence	
CS 520	Computer Science Foundations	
CS 521	Data Structures and Algorithms I	
CS 525	Theory of Computation	
CS 570	Programming Foundations	
CS 571	Advanced Programming Techniques	
CS 575	Software Design	
CS 590	Privacy	
CS 610	Advanced Artificial Intelligence	
CS 613	Machine Learning	

Experiential Learning Requirement 3.0

Please select one (1) of the following:

BUSN 615	Graduate Internship	
MGMT 715	Business Consulting	
INTB 790	International Business Seminar and Residency	

Graduate-level electives 3.0

Total Credits 45.0

Sample Plan of Study

First Year				
Fall	Credits Winter	Credits Spring	Credits Summer	Credits
ECON 540 or STAT 610	3.0 ECON 550	3.0 ECON 560	3.0 VACATION	
ECON 548	3.0 ECON 614	3.0 CS Required elective	3.0	
CS Required elective	3.0 CS Required elective	3.0 Elective	3.0	
	9	9	9	0
Second Year				
Fall	Credits Winter	Credits		
ECON 610	3.0 ECON 700	3.0		
CS Required electives	6.0 CS Required elective	3.0		
	Elective	3.0		
	9	9		
Total Credits 45				

Economic Data Analysis

About the Graduate Minor

Integral to the application of economics to decision making is the gathering and interpretation of data for planning, forecasting, and policy-making purposes. The graduate minor in Economic Data Analysis gives students a solid foundation in quantitative methods, including but not limited to econometric and statistical techniques. These quantitative techniques can be applied to a wide variety of fields outside of the economics discipline, such as management and decision sciences, marketing, finance, engineering, public health, medicine and psychology. The minor consists of taking two courses that provide training in core statistical and econometric theory; students then choose from a variety of additional courses that provide the student with practical and hands on experience applying these tools to real life economic problems.

Admission Requirements

Student must be a matriculated graduate student. This minor is not available to students pursuing an MS in Economics. For more information on admissions, please contact the program manager for MS in Economics (<http://www.lebow.drexel.edu/academics/graduate/current-students/advising/advisors/>).

Program Requirements

ECON 550	Econometrics	3.0
ECON 540 or STAT 610	Intro to Econometrics and Data Analysis Statistics for Business Analytics	3.0
Select two of the following additional courses		6.0
ECON 548	Mathematical Economics	
ECON 560	Time Series Econometrics	
ECON 610	Microeconomics	
ECON 639	Applied Industrial Analysis	
ECON 644	Trade Policy: Theory and Evidence	
Total Credits		12.0

Graduate Minor in Economics

About the Graduate Minor

Economics addresses how resources and capabilities can be utilized to provide goods and services to society. As such, the study of economics will be valuable to any student whose area of study involves issues of decision making, resource allocation or social welfare. The graduate minor in Economics gives students a foundation in economic theory that can be applied to areas such as finance, marketing, public policy, public health, law, business, or medicine. After taking one course that provides training in core microeconomic theory, students can choose from a variety of courses that cover other areas such as macroeconomics, international trade, game theory, or public finance.

Program Requirements

ECON 601	Managerial Economics	3.0
Select three of the following additional courses		9.0
BUSN 502	Essentials of Economics	
ECON 548	Mathematical Economics	
ECON 550	Econometrics	
ECON 560	Time Series Econometrics	
ECON 610	Microeconomics	
ECON 614	Macroeconomics	
ECON 616	Public Finance and Cost Benefit Analysis	
ECON 621	Business, Government, and Global Macroeconomics	
ECON 630	International Economics	
ECON 631	International Macroeconomics	
ECON 634	History of Economic Analysis	
ECON 639	Applied Industrial Analysis	
ECON 644	Trade Policy: Theory and Evidence	
ECON 650	Business & Economic Strategy: Game Theory & Applications	
ECON 661	Health Economics	
ECON 662	Economic Analysis of Health Systems	
ECON 700	Economics Seminar	
Total Credits		12.0

Index

E

Economic Data Analysis	8
Economics	2
Economics	5
Economics and Computer Science	7

G

Graduate Minor in Economics	8
-----------------------------------	---

L

LeBow College of Business: School of Economics	2
--	---