



EE484

EMPIRICAL INDUSTRIAL ORGANIZATION

Bachelor of Economics (International Program)

Faculty of Economics, Thammasat University

Semester 2/2025 (January 5 - May 2, 2026)

COURSE INFORMATION

Course Code	EE484
Course Title	Empirical Industrial Organization for Economists
Section	046401
Credit Hours	3 Credits (3-0-6)
Semester	2/2025 (January 5 - May 2, 2026)
Class Schedule	Friday, 13:00-16:00
Classroom	To be announced
Prerequisites	EE325 Introductory Econometrics or equivalent

INSTRUCTOR INFORMATION

Instructor	Asst. Prof. Dr. Monthien Satimanon
Office	Faculty of Economics, Thammasat University
Email	monthien@econ.tu.ac.th
Office Hours	By appointment

COURSE DESCRIPTION

This course provides students with a comprehensive understanding of empirical methods in industrial organization, combining economic theory with econometric techniques to analyze firm behavior, market structure, and competition policy. Students will learn to apply state-of-the-art empirical methods to study real-world industrial organization issues, with particular emphasis on structural estimation, market power analysis, and policy evaluation.

The course emphasizes hands-on data analysis using Stata, enabling students to develop practical skills in implementing econometric models for industrial organization research. Topics include demand estimation, production function estimation, market power measurement, entry and exit models, mergers and acquisitions analysis, and competition policy evaluation.

Software: Stata (required)

ALIGNMENT WITH PROGRAM LEARNING OUTCOMES

This course is designed to develop the following Program Learning Outcomes for the Bachelor of Economics (International Program) curriculum 2023:

Knowledge (K)

- K1: Acquire knowledge and understanding of economic theories, fundamental economic tools, theory development, and applied economics
- K2: Ability to apply theoretical knowledge to analyze and provide practical suggestions for economic and social issues
- K3: Ability to appropriately integrate economic knowledge with other study fields

Skills (S)

- S1: Acquire intellectual skills and ability to think systematically to identify research topics, perform research, process data, and evaluate findings
- S2: Acquire analytical and communication skills and ability to interpret data from different sources
- S3: Acquire quantitative and technological skills for research studies

Ethics (E) and Character (C)

- E4: Develop professional ethics
- C1: Ability to effectively complete assigned tasks and responsibilities
- C2: Ability to initiate problem analysis independently and/or in teamwork
- C4: Show active learning characteristics and aspire to personal development
- C5: Acquire interpersonal skills and ability to collaborate and adapt to changing circumstances

COURSE LEARNING OUTCOMES (CLOs)

Upon successful completion of this course, students will be able to:

CLO 1: Theoretical Understanding (Aligns with K1, K2, K3)

Demonstrate comprehensive understanding of industrial organization theory and its empirical applications, including market structure, firm conduct, and competitive dynamics.

CLO 2: Empirical Methods Proficiency (Aligns with S1, S3, C4)

Apply advanced econometric techniques including demand estimation, production function estimation, and structural models to analyze industrial organization problems using Stata.

CLO 3: Data Analysis and Interpretation (Aligns with S1, S2, S3, C2)

Collect, process, and analyze industry-level and firm-level data to test economic hypotheses and evaluate market outcomes.

CLO 4: Policy Evaluation (Aligns with K2, S2, E4)

Critically evaluate competition policies, merger decisions, and regulatory interventions using empirical evidence and economic reasoning.

CLO 5: Research Communication (Aligns with S2, C1, C5)

Effectively communicate empirical findings through written reports and presentations, demonstrating ability to translate complex econometric results into policy-relevant insights.

CLO 6: Professional Practice (Aligns with E4, C1, C2, C5)

Demonstrate ethical conduct in empirical research, including proper data handling, transparency in methodology, and acknowledgment of limitations.

LEARNING ASSESSMENT

Component	Weight	Due Date
Assignment 1: Data Analysis and Descriptive Statistics	15%	Week 5
Assignment 2: Demand Estimation Project	20%	Week 10
Assignment 3: Market Power Analysis	20%	Week 14
Mid-term Examination (Take-home)	20%	Mar 2, 2026
Final Examination (Take-home)	25%	May 9, 2026
Total	100%	

Grading Scale

Letter Grade	Percentage	Grade Points	
A	85-100	4.0	B+: 75-84 (3.5)
B	70-74	3.0	C+: 65-69 (2.5)
C	60-64	2.0	D+: 50-59 (1.5)
D	40-49	1.0	F: 0-39 (0.0)

AUNQA GRADING RUBRICS

Each assignment will be evaluated using the following AUNQA-aligned rubrics:

1. Theoretical Understanding (25%)

Level	Score	Criteria
Excellent	23-25	Demonstrates exceptional understanding of IO theory; correctly applies relevant theoretical frameworks; provides insightful economic interpretations
Good	20-22	Shows solid understanding of IO theory; applies theoretical frameworks appropriately; provides clear economic interpretations
Satisfactory	16-19	Demonstrates adequate understanding; applies theory with minor errors; provides basic economic interpretations
Needs Improvement	0-15	Limited understanding of theory; significant errors in application; weak or missing economic interpretations

2. Empirical Methods and Stata Implementation (30%)

Level	Score	Criteria
Excellent	27-30	Implements advanced econometric techniques correctly; Stata code is efficient, well-documented, and error-free; appropriate diagnostic tests conducted
Good	24-26	Implements econometric methods correctly; Stata code is functional and documented; conducts relevant diagnostic tests
Satisfactory	18-23	Implements basic methods with minor errors; Stata code works but lacks optimization; limited diagnostic testing
Needs Improvement	0-17	Significant errors in implementation; Stata code has major issues; inadequate or missing diagnostic tests

3. Data Analysis and Results (25%)

Level	Score	Criteria
Excellent	23-25	Comprehensive data analysis; results presented clearly with excellent visualizations; robust interpretation of findings
Good	20-22	Thorough data analysis; results well-presented; solid interpretation of findings
Satisfactory	16-19	Adequate data analysis; results presented but could be clearer; basic interpretation provided
Needs Improvement	0-15	Insufficient analysis; poor presentation of results; weak or incorrect interpretation

4. Critical Thinking and Policy Implications (15%)

Level	Score	Criteria
Excellent	14-15	Demonstrates exceptional critical analysis; provides nuanced policy recommendations; acknowledges limitations
Good	12-13	Shows strong critical thinking; offers relevant policy insights; recognizes key limitations
Satisfactory	9-11	Demonstrates adequate critical analysis; provides basic policy implications; limited discussion of limitations
Needs Improvement	0-8	Limited critical analysis; weak or missing policy discussion; fails to acknowledge limitations

5. Academic Writing and Presentation (5%)

Level	Score	Criteria
Excellent	5	Exceptional writing quality; perfect citation format; professional presentation; no grammatical errors
Good	4	Strong writing; proper citations; good presentation; minimal grammatical errors
Satisfactory	3	Adequate writing; citations mostly correct; acceptable presentation; some grammatical errors
Needs Improvement	0-2	Poor writing quality; citation errors; unprofessional presentation; numerous grammatical errors

COURSE SCHEDULE

Week 1: January 9, 2026 - Introduction to Empirical IO

- Course overview and expectations
- Review of econometric foundations
- Introduction to Stata for IO analysis
- Reading: Akerberg et al. (2007) - Sections 1-2
- Lab: Stata refresher workshop

Week 2: January 16, 2026 - Market Structure and Concentration

- Market definition and industry classification
- Concentration indices (HHI, CR4)
- Lab: Computing concentration measures in Stata
- Stata Topic: Data manipulation, merge, collapse commands

Week 3: January 23, 2026 - Demand Estimation I

- Consumer choice theory and demand
- Identification in demand estimation
- Lab: IV estimation of demand
- Stata Topic: ivregress, ivreg2 commands

Week 4: January 30, 2026 - Demand Estimation II

- Logit and nested logit models
- BLP methodology introduction
- Lab: Estimating discrete choice models

Week 5: February 6, 2026 - Production Function Estimation I

- Endogeneity in production functions
- Olley-Pakes methodology
- **DUE: Assignment 1 - Data Analysis and Descriptive Statistics**

Week 6: February 13, 2026 - Production Function Estimation II

- Levinsohn-Petrin methodology
- Akerberg-Caves-Frazer approach

Week 7: February 20, 2026 - Market Power and Markups

- Price-cost margins and Lerner index
- De Loecker & Warzynski approach

Week 8: February 27, 2026 - MID-TERM EXAMINATION WEEK

- **NO LECTURE - Take-home Mid-term Released**
- **Mid-term Due: Monday, March 2, 2026, 14:00**

Week 9: March 6, 2026 - Entry and Exit Models I

- Dynamic discrete choice framework
- Lab: Estimating entry models

Week 10: March 13, 2026 - Entry and Exit Models II

- Empirical models of entry and exit

- **DUE: Assignment 2 - Demand Estimation Project (March 20)**

Week 11: March 20, 2026 - Auctions and Bidding

Week 12: March 27, 2026 - Merger Analysis I

Week 13: April 3, 2026 - Merger Analysis II

Week 14: April 10, 2026 - Vertical Restraints

Week 15: April 24, 2026 - Platform Markets

- **DUE: Assignment 3 - Market Power Analysis**

Week 16: May 1, 2026 - Course Review

- **Final Examination: Saturday, May 9, 2026, 09:00-12:00**

COURSE POLICIES

Academic Integrity

All students must adhere to the highest standards of academic integrity. Academic misconduct will result in an F grade for the course and may lead to disciplinary action by the university.

Late Submission Policy

- Assignments: 10% deduction per 24-hour period (max 3 days late)
- Examinations: Late submissions accepted only with documented emergency

Attendance and Participation

Attendance is strongly encouraged but not mandatory. Students are responsible for all material covered in class.

IMPORTANT DATES SUMMARY

Date	Event
January 5, 2026	Semester begins
January 9, 2026	First class
February 6, 2026	Assignment 1 due
February 27, 2026	Mid-term exam released (No lecture)
March 2, 2026	Mid-term exam due
March 20, 2026	Assignment 2 due
April 24, 2026	Assignment 3 due
May 1, 2026	Last class
May 9, 2026	Final exam (Take-home released)

CONTACT INFORMATION

Instructor

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This syllabus is subject to change. Any modifications will be announced in class and via email.