



NATIONAL UNIVERSITY OF ENGINEERING

COLLEGE OF ENVIRONMENTAL ENGINEERING

HYGIENE AND INDUSTRIAL SAFETY ENGINEERING PROGRAM

AA226 – ECONOMIC THEORY

I. GENERAL INFORMATION

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| CODE | : AA226 Economic Theory |
| SEMESTER | : 5 |
| CREDITS | : 4 |
| HOURS PER WEEK | : 6 (Theory – Practice) |
| PREREQUISITES | : AA232 Biostatistics I |
| CONDITION | : Compulsory |

II. COURSE DESCRIPTION

This practical and theoretical course encompasses microeconomic and macroeconomic theories. In this course, students will analyze the conceptual framework, theories of consumer behavior, production theories, production cost theories, perfect and imperfect competition market theories, and fundamental equilibrium. In the macro context, it deals with, aggregates of an economy such as, aggregate supply, aggregate demand and external sector in the dynamics of globalization and government policies such as the fiscal, monetary, foreign exchange and commercial ones, and plus economic growth and development subjects. The above mentioned content trains students in the analysis and solution to contextualized entrepreneurial problems, as well as the understanding of economic facts and phenomena in every single agent within the country and the world.

III. COURSE OUTCOMES

1. Analyze and synthesize concepts related to microeconomic theory and principally differentiate it from the macroeconomic theory.
2. Explain and learn concepts related to the structure of an economy perfectly competitive according to the law of supply and demand.
3. Understand and apply the knowledge about consumer behavior to production and logistics strategies.
4. Analyze and solve problems about optimization of productions, costs, profits, investments in competition conditions.
5. Identify different types of imperfect markets to formulate their competition strategies.
6. Use basic concepts of macroeconomics, developing analysis and synthesis skills to understand effects of global changes and make opportune and appropriate entrepreneurial decisions.
7. Interpret changes in the aggregate demand, aggregate supply, monetary system, financial system and macroeconomic policies to obtain an accurate and successful economic and financial decision making at national and international level.

IV. LEARNING UNITS

1. GENERAL IDEAS AND CLASSIFICATION OF THE ECONOMY / 8 HOURS

The sphere of economy / Methods and problems of economic theory / Classification of the economic science / Variables and indicators for the economic analysis / Introduction to microeconomics / Theory of demand / Demand conditioning factors / Income elasticity, cross elasticity and price elasticity of demand / Application cases and problems.

2. THEORIES OF CONSUMER BEHAVIOR / 8 HOURS

Cardinal approach to the theory of consumer behavior / Total utility / Average utility / Marginal utility / Ordinal theory of consumer / Consumer budget / Equilibrium / Substitution effect / Income effect / Changes in consumer equilibrium / Application cases and problems.

3. MARKET EQUILIBRIUM AND SUPPLY THEORIES / 12 HOURS

Supply curve / Conditioning factors / Changes in supply / Elasticity of supply / Market equilibrium / Changes in equilibrium / Shortage / Overproduction / IZO Production account / IZO

curve / Producer costs / Short-term production / Long-term production / Producer equilibrium / Production surplus.

4. PRODUCTION COSTS THEORY / 5 HOURS

Total cost of production / Fixed costs / Variable costs / Average cost / Average fixed cost / Average variable cost / Marginal cost / Cost functions / Entrepreneurial cases and problems.

5. THEORY OF THE MARKET ORGANIZATION / 5 HOURS

Theory of the market organization / Perfect competition / Monopoly / Oligopoly / Monopolistic competition / Oligopsony / Monopsony / Business equilibrium and price determination in competitive and non competitive markets / Application problems.

6. INTRODUCTION TO MACROECONOMICS / 10 HOURS

Basic concepts of macroeconomics / Global economic system / Globalization / Economic theory and policy / National accounts / Macroeconomic aggregates / Input-output model / Aggregate demand and supply / Consumption-saving-investment / Macroeconomic equilibrium / Two, three, and four economic sector models / Theory of the multiplier.

7. SECTORS OF AN ECONOMIC SYSTEM / 8 HOURS

Real sectors / Fiscal sector, government budget / Macroeconomic aggregates / GDP and its measurement / Public sector / Arbitrary taxation / Public expenditure / Public investment / External sector. Balance of payments / International reserves / Inflation / Economic growth / Economic development.

8. MACROECONOMIC POLICY / 8 HOURS

Monetary sector / National financial system / Central Reserve Bank of Peru / Monetary supply and demand / IS/LM model / Monetary policy / Fiscal policy / Foreign exchange policy / Commercial policy / Economic cycles / Exchange rate models / Free trade agreement / International financial and economic crisis.

V. PAPERS OF RESEARCH ON ECONOMY

- 1: Research on Primary Economic Activity.
- 2: Research on Secondary Economic Activity.
- 3: Research on Service Activities.
- 4: Research on the external sector and International Trade Agreements

VI. METHODOLOGY

This course is carried out in theory and practical sessions, research papers and conferences. In theory sessions, the instructor introduces the graph theoretical and mathematical analysis of concepts, principles, theories and applications. In practical sessions, different problems are solved and their contextualized solutions are analyzed. Research papers on several economic sectors are controlled throughout the semester allowing interaction with the real world. At the end of the course, students must hand over, expose and support executively dressed. In all sessions, students' active participation is encouraged and graded.

VII. EVALUATION FORMULA

The average grade PF is calculated as follows:

$$PF = 0.25 EP + 0.25 EF + 0.10 P1 + 0.10 P2 + 0.10 P3 + 0.20 TF$$

EP: Mid-Term Exam

EF: Final Exam

P#: Quizzes

TF: Final Paper

VIII. BIBLIOGRAPHY

1. **ROBERT S. PINDYCK, DANIEL L. RUBINDENFEL**
Microeconomics (Spanish)
7th edition (2012)
2. **MICHAEL PARKING, GERARDO ESQUIVEL**
Macroeconomics (Spanish)
7th edition (2014)
3. **JUAN FERNANDEZ CH., ENRIQUE ROMERO G.**
Basic Economy for Business Management (Spanish)
2008 Edition