
COURSE SYLLABUS

FOR FULL-TIME UNDERGRADUATE PROGRAMS

(Issued under Decision No.1380/QĐ-ĐHKTQĐ on 15/8/2016 by the University President)

1. COURSE NAME: Input – Output Model

Code: TOKT1120

Number of Credit: 2

2. DEPARTMENT IN CHARGE OF INSTRUCTION:

Office: *Location

Office Hours: *Times & Days

Office Telephone: *Phone Number

3. PRE-REQUISITE:

Microeconomics 1, Macroeconomics 1, Advanced Mathematics.

4. COURSE DESCRIPTION:

This module introduces I-O model, mathematical background and applications of I-O table in economic analyzing and forecasting.

5. COURSE OBJECTIVES:

This module equips students with basic knowledge about the I-O model and I-O analysis in economics. After completing the course studies, students are able to grasp the meanings and roles of components in I-O table, the links between these components in the economy. Students can use I-O table to make economic analysis of the relationship between final and total demands, and primary inputs, plan for economy in following years, and estimate the price index for each industry according to changes in prices of the primary inputs. Especially, based on I-O table applications, students can calculate the power of Dispersion Index (backward linkages) and forward linkages of the economic sectors which identifies key economic sectors, the development of which will boost other economic sectors.

6. COURSE CONTENTS:

TENTATIVE SCHEDULE

<i>No</i>	<i>Contents</i>	<i>Total hours</i>	<i>In details</i>		<i>Notes</i>
			<i>Theory</i>	<i>Practice, Discussion, Exams</i>	
1	Chapter 1	6	5	1	
2	Chapter 2	6	4	2	
	Chapter 3	18	12	6	
	Total	30	21	9	

Chapter 1 - SOME BASIC CONCEPTS

This chapter introduces some basic economic concepts used in the Input–Output model. The purpose of this chapter is to help students understand the concept of the system of national accounts (SNA), its basic categories, and the relationship between SNA and Input-Output model.

1.1 System of National Accounts (SNA)

1.1.1 What is the System of National Accounts?

- Concept
- The formation and development of SNA
- The purpose of the SNA

1.1.2 Series of accounts in the SNA

1.1.3 Applying SNA in Vietnam

1.2 Subdivision manufacturing and production in the SNA classification

1.2.1 International Standard Industrial Classification ISIC

1.2.2 Product Classification by CPC

1.2.3 Subdivision of the Vietnam economy (VSIC)

1.3 Some basic concepts

1.3.1 Production value

1.3.2 Intermediate consumption

1.3.3 Final consumption

1.3.4 The primary inputs

1.3.5 Value Added

1.3.6 Total Domestic Product (GDP)

1.4 Prices and prices comparison issue

1.4.1 The problem of prices in measuring production results

- Factor price
- Basic price
- Producer prices
- User price

1.4.2 Price comparison issue

- The actual price and fixed price
- International comparison price.

Chapter 2 – INPUT–OUTPUT TABLE IN KIND

This chapter introduces the structure as well as practical applications of input-output table in kind. The input-output tables applications will be presented in detail and updated to real analysis, which enables students to apply in their study when possible.

2.1 Concept

2.2 Coefficients of costs in the Input–Output table

2.2.1 Type 1: Coefficient of direct costs

2.2.2 Type 2: Coefficient of total costs to produce a unit of final demand

2.3 The basic applications of the input – output table

2.3.1 Application 1: Planning the year ($t + 1$)

2.3.2 Application 2: Calculate price of the products.

Texts and readings for the chapter:

1- Ngo Van My, 2009, SNA and I/O textbook, NEU.

2 - Leontief W.W, 1966, Input-Output Economics, Oxford University Press.

3 - Pyatt, G., J.I. Round, 1985, Social Accounting Matrices: A Basis for Planning, World Bank.

Chapter 3 – INPUT – OUTPUT TABLE IN VALUE

This chapter focuses on studying Input–Output table in value, the Input-Output table applications will be presented in detail and updated to real analysis. This chapter aims to provide students with analyzing methods based on the Input–Output table model and practicing that would be applied in future research.

3.1 Concept

3.1.1 Assumptions and the Input–Output model

3.1.2 The constitutive relations

3.2 The coefficients in the Input–Output table

3.2.1 Coefficient of direct costs

3.2.2 Coefficient of direct costs of primary inputs

3.2.3 Leontief inverse matrix and the coefficient of total cost.

3.3 Applications

3.3.1 Application 1: Planning

3.3.2 Application 2: Determine product price index

3.3.3 Application 3: Analysis of the relationship between final demand and total demand for primary inputs

3.3.4 Application 4: Backward linkages, forward linkages and identify key sectors

3.4 Classify Input–Output tables

Competitive and Non-competitive Input–Output table

Input–Output table in actual price and fixed price

3.5 The Input–Output table of Vietnam in 2000 and 2007

3.5.1 Introduce the Competitive and Non-competitive Input–Output table in practice.

3.5.2 Practice analysis on actual Input-Output table

- Students are grouped to perform basic analysis on each practical Input-Output table and comparative analysis of structural changes through the Input-Output tables in 2 points of time, analyzed under various scenarios as the primary input changes.
- Ask groups of students to report results of the analysis and class presentations.

Texts and readings for the chapter:

1- Ngo Van My, 2009, SNA and I/O textbook, Planning, World Bank.

2 - Leontief W.W, 1966, Input-Output Economics, Oxford University Press.

3 - Pyatt, G., J.I. Round, 1985, Social Accounting Matrices: A Basis for Planning, World Bank.

7. REQUIRED TEXTBOOKS & COURSE MATERIALS

1- Ngô Văn Mỹ, 2009, SNA and I/O textbook,

8. RECOMMENDED TEXTS & OTHER READINGS

1 - Leontief W.W, 1966, Input-Output Economics, Oxford University Press.

2 - Pyatt, G., J.I. Round, 1985, Social Accounting Matrices: A Basis for Planning, World Bank.

9. ASSESSMENT & GRADING POLICY:

- Score scale: 10

- Structure of score:

+ Attendance score: 10%

+ Midterm test score: 30%

+ The final exam: 60%

- Conditions of final exam:

+ Must attend at least 80% of the class.

+ Must have midterm test.

Hanoi, 2016

HEAD OF DEPARTMENT

(signed)

PhD. Nguyen Manh The

PRESIDENT

(signed)

Prof.Dr. Tran Tho Dat