

Economics Minor Program

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■ Introduction

Economics offers an in-depth look into the production, distribution, and consumption of goods and services in our society. Each of these processes involves the allocation of scarce resources, an idea that is at the core of the economic discipline. Studying how these decisions are made is of fundamental importance to understanding how our society operates. Economists answer questions related to these decisions by building mathematical models, testing the models with empirical data, and investigating economic relationships using statistical estimation methods. There are two primary subfields in economics: microeconomics and macroeconomics. Microeconomics focuses on the economic behavior of individual agents such as consumers, households, and firms. Microeconomists would be interested in studying how the price of a good is determined in different market environments. Macroeconomics, on the other hand, explores questions related to the aggregate economy such as economic growth, inflation, and unemployment. Macroeconomists would investigate the effectiveness of fiscal and monetary policy in stabilizing an economy that is in recession. Along with micro- and macroeconomics, econometrics provides mathematical and statistical methodologies that economists use for estimating, testing, and forecasting economic relationships.

Economics is a discipline that is built on mathematical rigor and the scientific method. Given the strong quantitative background of KAIST students, they are especially well-prepared to be leaders in the field. Historically, economics has had strong connections with various fields of science and engineering. The language of economic theory is pure mathematics. Concepts from courses such as real analysis and linear algebra are especially important. Econometrics, on the other hand, relies heavily on results from probability theory and statistics. Moreover, game theory, an important subfield to microeconomics, has many applications in bioengineering, computer science, and electrical engineering. Because economics, science, and engineering all share the similar quantitative tools, it is not surprising that some of the most prestigious economics departments in the world are found in universities with strong science engineering departments such as MIT, UC Berkeley, and Stanford. Given the talented students at KAIST, there is no reason why KAIST cannot join that list in

the future.

KAIST has offered the Economics Minor Program since the Spring semester in 2013. We offer core courses in microeconomics, macroeconomics, and econometrics as well as additional topics such as game theory, network economics, industrial organization, and international economics. The Economics Minor Program has an important role to play in preparing KAIST students to be the leading economic decision makers for our society in the future. For KAIST students who desire a career in economics, finance, or business, this program provides an invaluable stepping stone to success in those fields.