

July 6, 2021
Keio University

**Keio University Faculty of Economics Establishes
a New Program “DEEP”
—Developing Human Resources That Can Lead Japan’s DX
Through Economics + Data Science—**

The Keio University Faculty of Economics will establish a data science education program, the “Data-driven Economics and Econometrics Programme (DEEP),” in the 2022 academic year to develop human resources that can lead Japan’s digital transformation (DX) and contribute to the economy and society in the Society 5.0 era.

• Background on the establishment of the program

With the rapid accumulation and widespread use of big data and the introduction of new methods of analysis such as machine learning, economic research now requires knowledge and skills in data science, which was not covered in traditional economics education. In addition, the concept of statistical causal inference is now widely introduced in econometrics, and EBPM (Evidence-Based Policy Making), a framework for formulating economic policies and verifying their effects based on data, is attracting much attention. Evidently, there is an urgent need to develop human resources that can respond to this new trend in economic research. Furthermore, a shortage of DX human resources in the Society 5.0 era threatens to reduce Japan’s competitiveness and hinder sustainable economic growth. The Keio University Faculty of Economics establishes DEEP to fulfill our responsibility to nurture and turn out human resources who contribute to the economy and society.

• Outline of the program

Students at the Faculty of Economics who participate in DEEP will take a set of courses from the curriculum offered by the Faculty of Economics that are designated as important for data science, and systematically learn the basics of data science and its application to economic analysis. A certificate of completion will be awarded to students who acquired the required number of credits and submitted the fruits of their studies related to data science.

1. The DEEP curriculum consists of the following 3 course categories:

- Core courses to learn mathematics and statistics that form the basis of data science (for 1st- and 2nd-year students)
- Research courses to learn advanced data science methods and applications (for 3rd- and 4th-year students)
- Project-Based Learning (PBL) courses to learn the practice of data science (for 3rd- and 4th-year students)

2. PBL (Project-Based Learning) courses as the culmination of learning
The aim of the PBL courses is to take what was learned in data science courses beyond the classrooms so students can learn to use data science in solving real-world problems. The submission of completed works (papers, software applications, etc.) will be a requirement for the completion of DEEP. Seminar graduation theses and products of research projects on relevant topics will also be recognized as equivalent to works submitted to these PBL courses.

※Please direct any requests or inquiries to the contact information provided below in advance.

【Inquiries】

Keio University Faculty of Economics, Professor Teruo Nakatsuma
E-mail: nakatuma@econ.keio.ac.jp

【Inquiries regarding this press release】

Keio University Office of Communications and Public Relations (Toyoda)
Tel: 03-5427-1541 Fax: 03-5441-7640 E-mail: m-pr@adst.keio.ac.jp
Website: <https://www.keio.ac.jp/en/>