This course introduces experimental methods for scientific policy evaluation and causal inference. It helps academic researchers, policy makers, and industrial practitioners to answer three questions: (1) If a policy has been carried out, how does one scientifically quantify its effects? (2) If a policy is going to be implemented, how does one predict its effects? (3) Based on policies implemented, how does one design better policies in the future by making causal/behavioral inferences? It also discusses how to use experimental approaches to identify structural models, derive behavioral inferences, and make predictions.

Course Outline
- The Rubin counterfactual framework
- Experimental approach
  - Randomized controlled trials
- Quasi-experimental approaches
  - Conditional independence, regression, and matching
  - Fixed effects, difference-in-differences estimator, and panel data analysis
  - Jump and regression discontinuity design
  - Exclusion restriction and instrumental variable methods

Who Should Attend
- Academic researchers and postgraduate students who are concerned with program evaluation and causal inference
- Policy makers in government, NGOs, and international organizations who are engaged in designing and evaluating programs
- Industrial practitioners who are interested in designing and evaluating marketing and managerial strategies

Prerequisites
Basic knowledge of linear regression analysis

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Dr. Yi Junjian is Assistant Professor in the Department of Economics at the National University of Singapore. He got his PhD from the Chinese University of Hong Kong and then did a three year postdoc in the University of Chicago. His research focuses on economics on health and healthcare, labor and demographic economics, economic development, economics on human capital, and Chinese economy. Dr. Yi’s recent research papers have appeared in economics and demography journals, such as Economic Journal, Review of Economics and Statistics, and Demography. Dr Yi has taught Advanced Labor Economics courses and was highly rated for his teaching.