As digital technology increasingly becomes a core component of businesses and society, we need to recognize the volume and granularity of data that modern firms can observe and acquire, and more importantly, the scale and precision of analytics and artificial intelligence that firms can implement to optimize decision-making. The transformation from experience-based decision making to data-driven business operations only started manifesting itself in the past few years and even the leading firms like Facebook, Amazon, and Alibaba are only scratching the surface in exploring the innovative approaches in business analytics. In this course, we seek to offer a framework for understanding the value of business analytics and how the value can be realized for firm competitiveness.

This course will give you an overview into:

- Data-driven business models
- Value of data
- Agile analytics
- Problem solving and research framework
- Analytics paradigms
- Descriptive analytics
- Causal analytics
- Predictive analytics
- Prescriptive analytics
- Machine learning applications
- Large-scale field experimentation
- Decision making biases
- AI and Future of work

Specifically, each of the four professors will cover the following four aspects of business analytics:

Kevin Hong: Overview, value of data, data-driven business models, future of work
Nina Huang: Descriptive and causal analytics, experimentation
Keran Zhao: Predictive analytics, machine learning
Meng Li: Prescriptive analytics, optimization