Sungkyunkwan University (SKKU) International Summer Semester (ISS) 2023

Digital Technology and Strategic Management
Prof. Dong-hyu Kim, University of Glasgow

SHORT COURSE DESCRIPTION
This course focuses on the understanding and application of strategic planning tools (e.g., technology roadmapping) to generate strategic plans in line with the future directions of digital technologies. The course also covers the knowledge foundations of emerging digital technologies and businesses (e.g., artificial intelligence (AI), blockchains and cryptocurrencies, FinTech and the Internet of things (IoT)). Moreover, the course offers students with frameworks to analyse the competitive and collaborative strategies of firms (e.g., start-ups and incumbents) revolving around digital tech-driven opportunities.

READING MATERIALS

Week 1

Week 2

Weeks 3 & 4

COURSE REQUIREMENTS AND GRADING
• Attendance: 10%
• Team Project (Presentation and Report): 40%
• Final Essay Exam: 50%
COURSE SCHEDULE

– WEEK I –

Monday (26 June)
- Course Introduction:
  o Course Assignment and Assessment
  o Theory of Disruptive Innovation
  o Case of Tesla

Tuesday (27 June)
- Technology Roadmapping_1
  o Concept and Framework
  o Examples

Wednesday (28 June)
- Technology Roadmapping_2
  o Use of Miro, an online collaboration tool
- Internet of Things (IoT)_1
  o Concept

Thursday (29 June)
- Internet of Things (IoT)_2
  o Cases
  o Business Strategy

– WEEK II –

Monday (3 July)
- 5G and Connected & Autonomous Vehicles
  o Concepts and Cases
  o Business Strategy

Tuesday (4 July)
- Blockchains and Cryptocurrencies_1
  o Concepts
  o Cases, including Luna/Terra and FTX

Wednesday (5 July)
- Blockchains and Cryptocurrencies_2
  o Business Strategy: Case of Ripple
- FinTech
  o Concepts and Cases

Thursday (6 July)
- Machine Learning (ML)_1
  o Concept and Cases, including Decision Tree
  o Practice in R

– WEEK III –
Monday (10 July)
- Machine Learning (ML)_2
  - Concept and Cases, including Recommender Systems
  - Practice in R
- ML/AI
  - Concepts and Cases, including ANN, RNN/LSTM
  - Practice in R

Tuesday (11 July)
- Artificial Intelligence (AI)
  - Concept and Cases
  - Business Strategy
- Ethical AI
  - Concept and Cases
  - Guidelines

Wednesday (12 July)
- Digital Regulations
  - EU Digital Regulations, including AI Act
  - AI Policies and Strategies

Thursday (13 July)
- Analytical Frameworks of Business Environment
  - PESTEL
  - Industry Analysis
- Macroenvironmental Trends
  - ESG (Environmental, Social, Governance)

- WEEK IV-

Monday (17 July)
- Platform Competition
  - Concepts and Cases
  - Business Strategy
- Standards and Standardisation_1
  - Concept

Tuesday (18 July)
- Standards and Standardisation_2
  - Cases
  - Business Strategy
- Innovation and Ecosystems
  - Concept and Cases
  - Business Strategy

Wednesday (19 July)
- Technology Roadmapping Team Project Presentation