TEACHING PLAN FOR DATA SCIENCE PROGRAM UNDERGRADUATE LEVEL – 2024

Legend:
- Basic knowledge
- Foundational disciplinary knowledge
- Advanced disciplinary knowledge
- Supporting Knowledge
- Internship
- Non-accumulative knowledge

First year

Semester 1A
- Introduction to Computer Basics ITE1201 (3cr)
- English 1 ENG3101 (4cr)

Semester 2A
- Advanced Python Programming ITE1282 (3cr)
- English 3 ENG3103 (4cr)

Semester 1B
- English 2 ENG3102 (4cr)
- Project Design 1 SKI1107 (3cr)
- Basic Python Programming ITE1277 (3cr)

Semester 2B
- English 4 ENG3104 (4cr)
- Introduction to Law LAW1101 (3cr)
- Advanced Mathematics MAT1103 (3cr)

Second year

Semester 1A
- Probability and Statistics STA1101 (3cr)
- Data Structures and Algorithms ITE1283 (3cr)
- English 5 ENG3105 (4cr)

Semester 2A
- Physical Education 2 (1cr)
- (E) Introduction to Artificial Intelligence ITE1218E (3cr)
- Introduction to Databases ITE1207 (3cr)

Semester 1B
- English 6 ENG3106 (4cr)
- Computer Statistics DAS1101 (3cr)
- Physical Education 1 (1cr)

Semester 2B
- Project Design 2 SKI1108 (3cr)
- (E) Database Management Systems ITE1150E (3cr)
- Elective Course 1 (3cr)
- Physical Education 3 (1cr)
- Military Education MIL1203

Third year

Semester 1A
- (E) Getting and Cleaning Data DAS1204E (3cr)
- Econometrics ECO1104 (3cr)
- Marxist-Leninist Philosophy POL1111 (3cr)

Semester 2A
- (E) Data Visualization DAS1105E (3cr)
- (E) Principles of Marketing MKT1101E (3cr)
- Scientific Socialism POL1113 (2cr)

Semester 1B
- Marxist-Leninist Political Economics POL1112 (2cr)
- (E) Principle of Finance and Banking FIN1155E (3cr)
- (E) Machine Learning for Data Science DAS1131E (3cr)

Semester 2B
- History of the Communist Party of Vietnam POL1115 (2cr)
- Ho Chi Minh Ideology POL1114 (2cr)
- Microeconomics ECO1101 (3cr)
- Data Science Internship DAS1326 (1cr)
- Data Science Project DAS1427 (2cr)

Fourth year

Semester 1A
- (E) Time Series Analytics DAS1107E (3cr)
- Elective Course 2 (3cr)

Data Analytics in Economics - Business
- (E) Management Information Systems ITE1129E (3cr)

Data Analytics in Finance
- (E) Financial Data Analytics DAS1109E (3cr)

Data Analytics in Marketing
- (E) Enterprise Resource Planning Systems EBU1133E (3cr)

Semester 2A
Data Analytics in Economics - Business
- (E) Decision Making Optimization for Business DAS1113E (3cr)

Data Analytics in Finance
- (E) Investment Management with Python DAS1114E (3cr)

Data Analytics in Marketing
- (E) Data-driven Marketing DAS1117E (3cr)

- Elective Course 3 (3cr)
- Graduation Project / Thesis DAS1422/3 (6cr)
- Graduation Internship DAS1320 (3cr)

Semester 1B
- Data Analytics in Economics and Business Specialization Project DAS1428 (3cr)
- Data Analytics in Finance Specialization Project DAS1430 (3cr)

Data Analytics in Economics - Business
- (E) Business Process Analytics DAS1108E (3cr)
- (E) Business Strategy Analytics DAS1112E (3cr)

Data Analytics in Marketing
- (E) Online Consumer Behavior EBU1127E (3cr)
- (E) Digital Marketing Data Analytics DAS1116E (3cr)

Data Analytics in Finance
- Data Analytics in Finance Specialization Project DAS1429 (3cr)
- (E) Automation in Financial Investment DAS1110E (3cr)
- (E) Data Mining for Big Data DAS1118E (3cr)

Semester 2B

Notations Used
- Course name / Course ID (Credit) — Course information
- (E) — English-taught course

*Physical Education module: choose 1 out of 5 subjects: Aerobics, Boxing, Vovinam, Dancesport, Bodybuilding

List of elective courses
- Global Citizenship
- Japanese Concepts to Win Friends and Influence People
- Country Studies of Japan
- Country Studies of China
- World Economics Geography
- Cross-cultural Communication
- Mental Health Education
- Entrepreneurship
- Commercial Law
- International Law
- The Basic of Arts
- Arts of Leadership
- Professional Personal Branding
- Diplomatic Protocol
- Introduction to Digital Transformation
- Global Issues
- Enterprises Law
- Applied Data Analytics
- Personal Financial Management
- Global Strategic Management
- Communication Psychology
- Creative Presentation
- Aesthetic Thinking
- Diplomatic Reception and Table Art
- Korean Traditional Culture
- Human Civilization
- Cultures of Southeast Asia Countries