

COURSE DETAIL

CRYPTOGRAPHY AND NETWORK SECURITY

Country

Taiwan

Host Institution

National Taiwan University

Program(s)

National Taiwan University

UCEAP Course Level

Graduate

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

208

UCEAP Course Suffix**UCEAP Official Title**

CRYPTOGRAPHY AND NETWORK SECURITY

UCEAP Transcript Title

CRYPTGRPH NTRK SEC

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This is a research-oriented course for cybersecurity, a broad, fast, evolving discipline. The course covers important concepts but it not meant to be comprehensive. The following topics will be covered:

- The applied aspects of cryptographic primitives (randomness, hash, MAC, encryption, digital signatures)
- Cryptographic protocols (key exchange, authentication, anonymous communication, privacy-enhancing technologies)
- Network security (TCP/IP, DNS, BGP, TLS, DDoS, wireless, email, MLS)
- Advanced topics: _ security (IoT, SDN, blockchain, web, software, systems,...)

Course prerequisites: Basic knowledge in discrete mathematics, programming, and networking is strongly recommended. Class participants are also expected to comprehend research papers and conduct a research project.

Language(s) of Instruction

English

Host Institution Course Number

CSIE7190

Host Institution Course Title

CRYPTOGRAPHY AND NETWORK SECURITY

Host Institution Campus

Host Institution Faculty

College of Electrical Engineering and Computer Science

Host Institution Degree

Host Institution Department

Graduate Institute of Computer Science and Information Engineering

[Print](#)