Dongseo University
Division of Computer Engineering

Security Project

Instructor(s): HoonJae LEE/SangGon LEE
Office: -
Phone: -
Email: -

Classroom: -
Class Time: 3 hour/week
Office Hours: 9:00am - 8:00pm

Course Description:
This course involves specialized Network Security Projects as follows: The theorem of Cryptography and Network Security, Stream Cipher (eCRYPT, eSTREAM), Block Cipher (DES, AES, SEED, ARIA, CAMELIA), Public-Key Cryptosystems (RSA, ECC, ElGamal), Hash function (SHA-1, SHA-2, HAS-160), Digital Signature (DSS, KC-DSA), Cryptographic services (authentication, identification), etc.

Course Goals & Objectives:
At the conclusion of this course, the successful (passing) students will be able to program to classical ciphers and modern cryptography including stream cipher, block cipher, PKC (Public-Key Cryptosystem) and Hash codes & MAC codes.

Course Outline:

- **Week 1** Overview of the Information Security & Network Security
- **Week 2** Hardware Implementation for Fast Encryptions
- **Week 3** Network Security – IPsec, VPN (1)
- **Week 4** Network Security – IPsec, VPN (2)
- **Week 5** PKI (Public-Key Infrastructure)
- **Week 6** Digital Signature (DSS, KC-DSA),
- **Week 7** Hash Function (SHA-1, SHA-256, HAS-160)
- **Week 8** Security programming by team based (1)
- **Week 9** Security programming by team based (2)
- **Week 10** Security programming by team based (3)
- **Week 11** Network Security Laboratory by team based (1)
- **Week 12** Network Security Laboratory by team based (2)
- **Week 13** Network Security Laboratory by team based (3)
- **Week 14** Network Security Laboratory by team based (4)
- **Week 15** Final Week
Textbook(s)
- Required: "Cryptography and Network Security (by William Stalling)
- Recommended: PPT slides (uploaded to eclass.dongseo.ac.kr)

Class Website: e-Class

Course Assignments & Grading:
- Assignments: 30% (Team based Programming)
- Bonus Credit: None
- Grading: A/B/C/D/E/F

Grading Policies:
- Exams: Final 40%
- Quizzes: 10%
- Course Projects: None
- Attendance: 20%

Course Policies:
- Attendance: 20%
- Academic Misconduct Policy: