Lab 01 (2 hrs): Programming Basics

Program 1: Type Hint, String, Bytes, Hex, Base64

Lab 02 (4 hrs): Classical Cryptography

Part 1 (3 hrs):

Program 1: Vigenère cipher (on alphabet string)

Program 2: Columnar transposition (on alphabet string)

Part 2 (1 hrs):

Program 3: Vigenère cipher (on bytes)

Lab 03 (4 hrs): Symmetric Encryption

Part 1 (3 hrs):

Program 1: DES

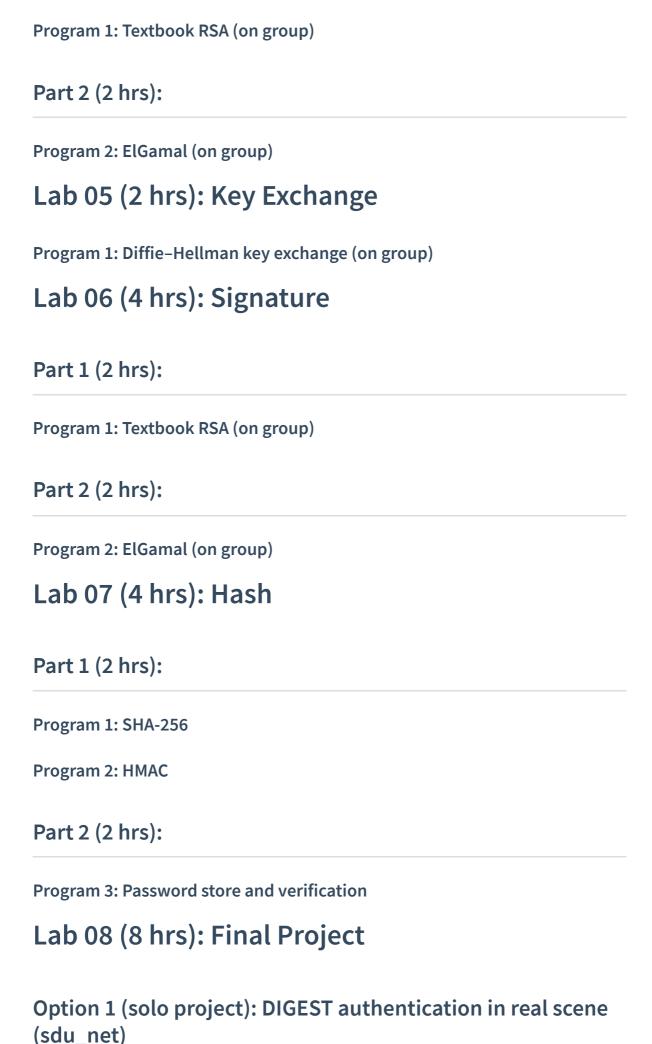
Program 2: 3DES

Part 2 (1 hrs):

Program 3: AES

Lab 04 (4 hrs): Public Key Encryption

Part 1 (2 hrs):



Option 2 (solo project): implement AES from scratch

Option 3 (group project of 2 students): hs-airdrop

Option 4 (group project of 2 students): Ethereum and smart contract demonstration

Option 5 (group project of 2 students): simple zeroknowledge proof demonstration