Applied Cryptology

SCHOOL
Polytech Graduate School of Engineering

CAMPUS
Belle-Beille

LEVEL
Engineering 5th year

OPEN TO EXCHANGE STUDENTS
Yes

SEMESTER
Fall (S1)

> **Degree course:** Graduate School of Engineering - Automation and Computer Engineering
> **Teaching unit:** UE 9.4.3 Cyber Security
> **Course language:** English
> **Duration (hours):** 20
> **ECTS:** 2
> **Teacher(s):** Alain Godon

> **Assessment:**

- [x] Continuous assessment
- [ ] Final exam

> **Teaching methods:**

[ ] Lecture course		hours	[ ] Case study
[ ] Tutorial course		hours	[ ] Project
[x] Practical work	20	hours	

COURSE DESCRİPTİON

Symmetric and asymmetric encryption
- Diffie-Hellman, RSA, AES, SHA algorithms
- Hash functions, signature, integrity check
- Confidentiality and data integrity: - encrypted containers - encryption of communications (email, web, dns ...)

OBJECTİVES

Computer security makes extensive use of concepts derived from cryptology, and many protocols are based on it. This course allows to scan these concepts through the implementation of various indispensable tools.

PREREQUİSİTES

Cyber security (UE 7.4)