UNIVERSITAT D'ANDORRA

Pla docent seminari

Pla d'estudis	Bàtxelor en Informàtica

Seminari	Seguretat Informàtica		
Semestre	2	**Curs acadèmic**	2024-2025
Professorat responsable **A/e**	Eric Casanovas ecasanovas@uda.ad		
Modalitat	Presencial i virtual		
Llengua de docència	Anglès		

1. Presentation

During the last years we have seen a great increase in the use of the internet by all of us. This has made it more important to keep the security and integrity of data in any communication that takes place over the Internet.

During this seminar you will learn and understand the methods and best practices to solve that problem and you will be able to create secure communications using different techniques that will be explained during this seminar.

2. Contents

3. Authentication & Web Security
    3.1. Authentication
        3.1.1. Sym. & asym. key authentication
        3.1.2. Diffie Hellman & Ephemeral DH
        3.1.3. Authentication factors
        3.1.4. Other concepts about authentication
    3.2. Web security
        3.2.1. DNSsec
        3.2.2. SSL
        3.2.3. Authentication & web
        3.2.4. Web attacks
4. Firewalls and network Security
    4.1. Firewalls
    4.2. DMZ
    4.3. Network attacks
        4.3.1. DDoS and DoS
    4.4. Iptables
5. Malware
    5.1. Types of malware
    5.2. Antivirus
6. Privacy & Anonymity
    6.1. Anonymity vs privacy
    6.2. GDPR
    6.3. Tor

3. Activities

3.1. Continuous evaluation

The continuous evaluation contains: 2 “treballs virtuals” (TV), 2 controls (C), 1 presentation (P), 1 Demo (D) and “el repte” of the modul evaluated in the 3 RA:

	TV 1	TV 2	P 1	D 1	C 1	C 2	REPTE	Avaluació Total
BInfo-E004-07 - Entén la problemàtica de la necessitat de disposar de comunicacions segures.	0%	0%	0%	0%	40%	60%	0%	100%
BInfo-E004-08 - Entén i aplica els algorismes essencials de xifrat simètric i asimètric.	35%	35%	20%	10%	0%	0%	0%	100%
BInfo-E004-09 - Aplica solucions criptogràfiques per obtenir confidencialitat, autenticació, integritat i no repudi.	0%	0%	0%	10%	0%	0%	90%	100%

3.2. Final evaluatation

The final evaluation contains: 2 “treballs virtuals” (TV), 1 final controls (CF), 1 presentation (P), 1 Demo (D) and “el repte” of the modul evaluated in the 3 RA:

	TV 1	TV 2	P 1	P 2	CF	REPTE	Avaluació Total
BInfo-E004-07 - Entén la problemàtica de la necessitat de disposar de comunicacions segures.	0%	0%	0%	0%	100%	0%	100%
BInfo-E004-08 - Entén i aplica els algorismes essencials de xifrat simètric i asimètric.	35%	35%	20%	10%	0%	0%	100%
BInfo-E004-09 - Aplica solucions criptogràfiques per obtenir confidencialitat, autenticació, integritat i no repudi.	0%	0%	0%	10%	0%	90%	100%

4. Extra resources

Bibliografia bàsica
Material del professor Apunts format diapositiva dels continguts del seminari. **Llibre de referència:** – Network security essentials: applications and standards - Williams Stallings – Cryptography Theory and practice 4th edition - Douglas Stinson – Serious cryptography - Jean-Philippe Aumasson

5. Observations

- In-person exams will only be repeated in exceptional circumstances. In order to be eligible to retake a test, the reason for the absence must be justified with supporting documentation.

- **Late submissions will not be accepted**.

- If a student does not complete any of the assessable activities, the RA grade with the uncompleted activity will be zero.

- All submissions will be made via the UdA Virtual Campus and **must be submitted in the format specified in the activity description**.

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