GENERAL INFORMATION

Data of the subject	
Subject name	Security in Communications Systems
Subject code	DTC-TEL-612
Mainprogram	Official Master´s Degree in Telecommunications Engineering
Involved programs	Máster Universitario en Ingeniería de Telecomunicación [Segundo Curso]
Credits	4,5 ECTS
Type	Obligatoria
Department	Department of Telematics and Computer Sciencies

Teacher Information	
Teacher	
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DESCRIPTION OF THE SUBJECT

Contextualization of the subject
Prerequisites
Previous knowledge is required on network communications, web applications, and introduction to cryptography.

Some programming skills are required for lab practices and exercises in class. |

Course contents

Contents

Chapter 1: Introduction and course overview

Chapter 2: Browser and HTTP/HTTPS fundamentals

Chapter 3: Security Architecture and Security Analysis Methodologies

Chapter 4: Attacks against the applications layer, and defenses

Chapter 5: Common web vulnerabilities, and pentesting

Chapter 6: Attacks against SSL/HTTPS and defenses

Chapter 7: More advanced side-channel attacks

Chapter 8: Mobile devices security

Chapter 9: Security Management Systems

Chapter 10: Security monitoring and computer forensics

Chapter 11: Policies and security governance (Recovery and Resiliency)

Chapter 12: Information trust and regulatory compliance (certification and standards)

Chapter 13: Conclusion, Guest lecture and/or open research discussion

EVALUATION AND CRITERIA

Evaluation activities	Evaluation criteria	Weight
Final Exam: 50% Tests: 20%	Knowledge of the subject Capability to apply suitable tools to solve problems	70 %
Labs evaluation	Knowledge of the subject Capability to apply suitable tools to solve problems	30 %

Grading

Exams 70%

- 50% Final exam
- 20% Tests

Labs evaluation 30%

- 20% Lab reports
- 10%Active participation in class

July Exam (retake)

- 80% Retake Exam
- 20% Labs

BIBLIOGRAPHY AND RESOURCES

Basic References

- John R. Vacca, Managing Information Security, Second Edition -http://www.amazon.com/Managing-Information-Security-Second-Edition/dp/0124166881

- Michal Zalewski ,The Tangled Web: A Guide to Securing Modern Web Applicationshttp://www.amazon.com/The-Tangled-Web-Securing-Applications/dp/1593273886

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