

[MNB102] Offensive Security

GENERAL INFORMATION

| | | | |
|------------------|---|--|---|
| Studies | MASTER DEGREE IN DATA ANALYSIS, CYBERSECURITY AND CLOUD COMPUTING | Subject | Cybersecurity |
| Semester | 2 | Course | 1 |
| Character | COMPULSORY | Mention / Field of specialisation | |
| Plan | 2024 | Modality | Face-to-face |
| Credits | 3 | Hours/week | 0 |
| | | Language | ENGLISH |
| | | Total hours | 32 class hours + 43 non-class hours = 75 total hours |

PROFESSORS

EZPELETA GALLASTEGI, ENAITZ

REQUIRED PREVIOUS KNOWLEDGE

| Subjects | Knowledge |
|---|---|
| <i>(No specific previous subjects required)</i> | <i>(No previous knowledge required)</i> |

LEARNING RESULTS

| LEARNING RESULTS | KC | SK | AB | ECTS |
|--|----|----|----|------|
| M2N107 - Defining, designing and conducting offensive security audits on target networks and infrastructure, exploiting existing vulnerabilities, so that it can identify different attack vectors. | | x | | 2,4 |
| M2N210 - Possess the learning skills that will enable them to continue studying in a largely self-directed or autonomous way. | | x | | 0,6 |
| Total: | | | | 3 |

KC: Knowledge or Content / SK: Skills / AB: Abilities

SECONDARY LEARNING RESULTS

RA222 Knows how to exploit vulnerabilities that allow compromising the targets, minimizing the exposure to possible security countermeasures that they may have.

LEARNING ACTIVITIES

| | CH | NCH | TH |
|---|------|-------|-------|
| Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams | 2 h. | 6 h. | 8 h. |
| Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects | 8 h. | | 8 h. |
| Carrying out exercises and solving problems individually and/or in teams | 4 h. | 10 h. | 14 h. |

EVALUATION SYSTEM

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

W

100%

MAKE-UP MECHANISMS

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

CH - Class hours: 14 h.

NCH - Non-class hours: 16 h.

TH - Total hours: 30 h.

RA221 Knows how to recognize different possible attack vectors on one or several targets based on analyzing information sources and performing reconnaissance, individually or in a coordinated group.

LEARNING ACTIVITIES

| | CH | NCH | TH |
|---|------|-------|-------|
| Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams | 7 h. | 15 h. | 22 h. |
| Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints | 2 h. | 8 h. | 10 h. |
| Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects | 6 h. | | 6 h. |
| Carrying out exercises and solving problems individually and/or in teams | 3 h. | 4 h. | 7 h. |

| EVALUATION SYSTEM | W | MAKE-UP MECHANISMS |
|--|----------|---|
| Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems | 17% | Individual written and/or oral tests or individual coding/programming tests |
| Individual written and/or oral tests or individual coding/programming tests | 83% | |
| CH - Class hours: 18 h. NCH - Non-class hours: 27 h. TH - Total hours: 45 h. | | |

CONTENTS

- Security audit overview
- Asset reconnaissance
- Asset exploitation
- Post exploitation
- Audit reports

LEARNING RESOURCES AND BIBLIOGRAPHY

| Learning resources | Bibliography |
|---|---|
| Subject notes Topic related web quires Moodle Platform Class presentations Computer practical training Slides of the subject | https://labur.eus/MlqZ8 |