INFORMATICS ENGINEERING

SECURITY ENGINEERING

LABORATORY ASSIGNMENTS

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Previous appointment

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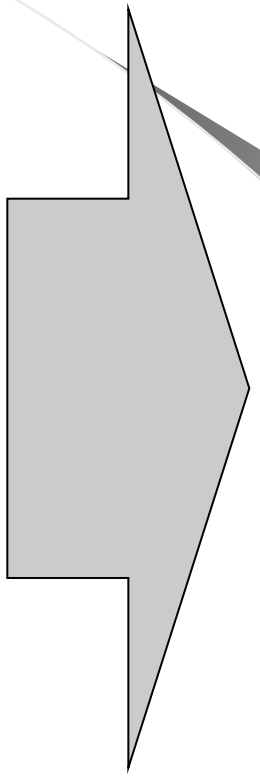
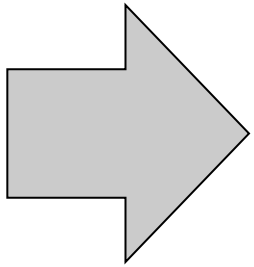
INTRO. SECURITY ENGINEERING

- **Security Engineering:**
  - Study of the
    - Tools,
    - Processes, and
    - Methods
  - Needed for
    - Design,
    - Develop,
    - Implement, and
    - Test
  - Secure systems
  - **Adapt existing ones to make them secure**



Theory
+
First module of the lab assignments



Partial engineering project (rest modules)

INTRO. LAB. ASSIGNMENTS

Lab assignment planning:

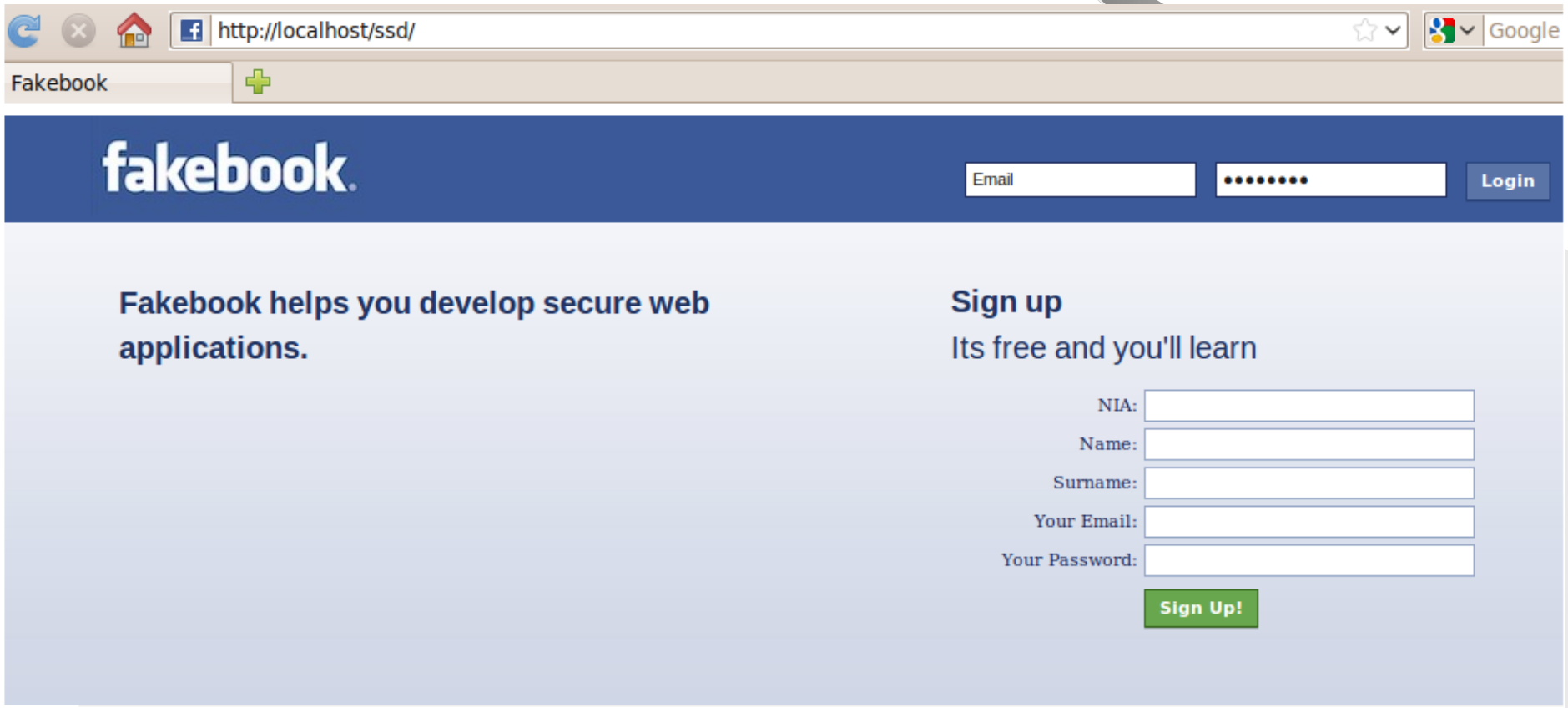
1. Module 1 – Background assignments
    1. Access control and authentication
    2. Network analyzer
    3. Malware
2. Module 2 - Fakebook part 1
    1. Vulnerability detection and threat identification
    2. Intrusion detection
    3. Firewall as a countermeasure
3. Module 3 - Fakebook part 2
    1. Application security analysis
    2. Application security improvement

INTRO. LAB. ASSIGNMENTS

- **Goals of the lab assignments:**
  - Complexity of ensuring security principles in today IT systems and architectures.
  - Security as a multidisciplinary subject.
- **Goals of the first module:**
  - Present *main* **tools**…
- **Goals of the following modules:**
  - Learn how to apply the main security countermeasures in a *partial* engineer project.
    - Prevention, Detection, Correction, and (Recuperation)

INTRO. FAKEBOOK

- **Fakebook** —*Partial* engineer project:
  - Create a security plan to secure a **server**



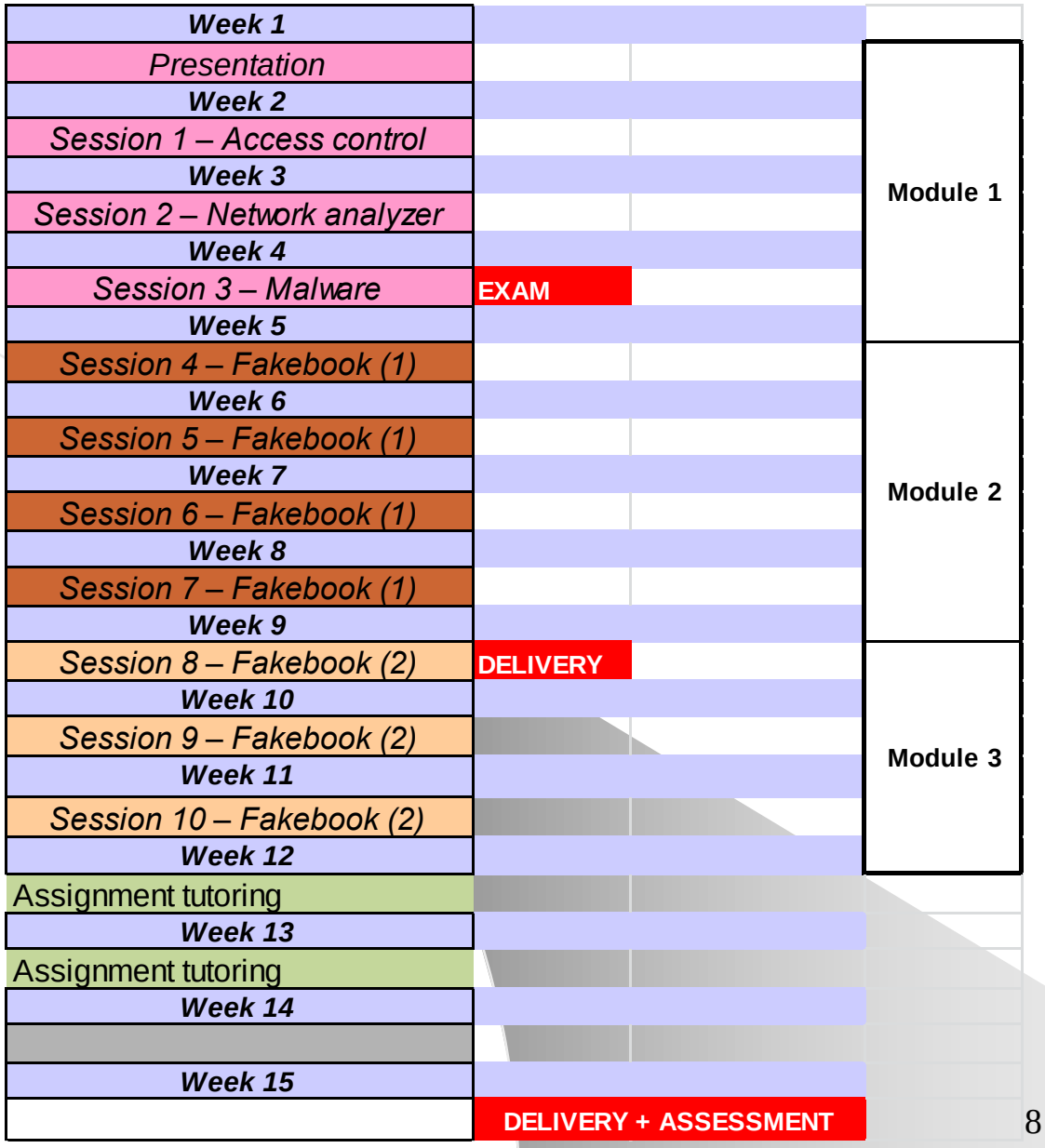
INTRO. FAKEBOOK

- **Fakebook**:
  - **Analyze the security of a social network (Fakebook)**
  - **Design a security plan which** would take appropriate measures for securing the server (providing services such as confidentiality, integrity and availability).
  - Bear in mind the intended use of the services.

LAB. ASSIGNMENTS

Chronogram:

Room 1.0.A01



LAB. ASSIGNMENTS

EVALUATION (40%):

- Module 1
  - Exam 5%
- Module 2
  - Delivery 10%
- Module 3
  - Delivery + Assessment 10%
- Exam 15%

Considerations:

- Assignments will be done in groups of two persons.
- ECTS = day-to-day work.
- Assignment deliveries must meet the deadline.
- It is recommended the use of a personal laptop for the second and the third module.
- **Every document and email must be delivered using electronic signature.**
  - **Students must own a qualified digital certificate**

Electronic signature of documents and emails

Public key certificate:

- How do I obtain it?
  - Using **DNIe** or **NIE**
    - Two certificates are used:
      - Authentication
      - Sing
  - Using a user certificate issued by the FNMT (Recommended)

How to obtain a user certificate from the FNMT:

- Access to: http://www.cert.fnmt.es/
- Follow instructions
- Possible authorities
- Requests to the certification authority can be done at:
  - Carlos III University of Madrid (Leganés)
    - Inmaculada Aparicio 1.0.J.02
  - City hall
  - Other:

    http://callejero.telefonica.es/PuntosCercanos/index.jsp?client=fnmt