

## Course Syllabi

### 1. TICS-00059 WEB PROGRAMMING

### 2. 192 credits hours.

### 3. Bibliography

- Resources for Developers, by Developers (Mdn Web Docs), Mozilla, 2024
- <https://www.w3schools.com/>, w3Schools, 2024
- Manuales provistos por el docente, Cedillo Orellana, Irene Priscila, 2024

### 4. Specific Course Information

- a. Web applications are widely used in various domains; in addition, they go hand in hand with emerging technologies that require applications for their management and good use. In this context, the subject of Web Programming focuses on analyzing the technologies used for the development of applications in Internet and Intranet environments. In the first part of the subject, an analysis of the functioning of Web architectures is presented; either in monolithic architectures As in more distributed systems. Taking into consideration client-server environments. In the second part, the introduction to different user interface design techniques and tools for these applications is proposed, both in terms of back-end and front-end. In addition, the analysis of the main current frameworks is proposed, with the aim that the student can select the most suitable for applications according to the domain and the requirements of the usu ario. Finally, an introduction to the new architectures oriented to services is addressed and the bases are laid for the development in these architectures.

b. Prerequisites:

- TICS-00036 DATABASES II: ADMINISTRATION AND OPTIMIZATION

### 5. Learning Objectives of the Course

- a. Know the technologies involved in the development and deployment of web programming applications. Client
- server architectures and introduce the student to technologies oriented to services.
  - Know the functioning of Web applications, both from theory and practice.
  - Know the main technologies on the client side (Front
  - end)
  - Know the main technologies on the server side (Back
  - end)
  - Understand Web architectures and their operation
  - Analyzes r the most commonly used frameworks today
  - Meet various Web architectures and their general functioning at the conceptual level (Cloud computing, Mashups, Microservices)
- b. Learning Outcomes
- Learn about client server architectures and their main differences.
  - Includes service-oriented architectures (introduction)
  - Knows client-side languages (front-end)
  - It understands the operation of ajax and tools aimed at customer-server transactionality.
  - It understands the operation of ajax and tools aimed at customer-server transactionality.
  - Meet server-side languages (back-end)
  - Knows client-side languages (front-end)

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- It understands the operation of ajax and tools aimed at customer-server transactionality.
- Meet server-side languages (back-end)
- Includes service-oriented architectures (introduction)
- Learn about client server architectures and their main differences.
- Meet server-side languages (back-end)
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- Includes service-oriented architectures (introduction)

## **6. Course Topics**

- Explanation of the syllable
- Introduction to web technologies
- Basic concepts of web communication, html and brand languages
- Style sheets (css)
- Javascript and client-side languages
- Web application architectures
- Server-side programming and dynamic web pages
- Analysis of web development frameworks
- Component- and service-based web applications