

**CSE 4234 Web Applications (3 credits)**

**Primary instructor:** Marius Silaghi

**Textbooks and references:**

R. Sebesta, Programming the World Wide Web. Addison Wesley, 2010. ISBN 978-0132130813. (T)

**Course information:**

**2014–2015 Catalog description:** CSE 4234 (3 credits). Covers design and implementation of programs that offer services over the Web. Addresses Web-related standards and trends, browser compatibility, Web-related security and authentication, architectures, multimedia support and accessibility. Introduces multiple technologies (HTTP, SMTP, HTML, CSS, XML, JavaScript, PHP, JSP, applets, servlets).

**Prerequisites by topic:** Fundamentals of software development.

**Place in program:** Advanced elective

**Course outcomes & related student outcomes:** The student will be able to

1. Understand the advantages and limitations of the web platform for applications. (4c: Trade-offs in design choices)
2. Understand the trade-offs of alternative architectures for web application. (4c: Trade-offs in design choices)
3. Locate web-related standards. Read, use, and explain such standards. (5: Awareness of professional issues and responsibilities)
4. Be aware of browser compatibility issues, and how to deal with them. (3: Skillful use of tools)
5. Understand security issues at the basis of standards and best practices. (4b: Satisfaction of requirements)
6. Understand and use correctly technologies for authentication of users and servers. (3: Skillful use of tools)
7. Understand the light-clients vs. heavy-clients design and trade-offs. (4c: Trade-offs in design choices)
8. Experience with the development of web applications employing multimedia. (4a: Skillful software construction)
9. Know how to design for accessibility. (4b: Satisfaction of requirements)

**Topics covered:**

1. Advantages and drawbacks of the web platform for applications
2. Common architectures for web applications
3. Web-related standards and technologies
4. HTTP, CGI, HTML, JavaScript, CSS, XML, PHP, Applets, Servlets, Java Server Pages, and Flash
5. Introduction to accessory technologies: Databases, SMTP, and IMAP
6. Connecting various technologies
7. Internationalization
8. Browser compatibility issues and their evolution
9. Client side security
10. Server side security
11. Authentication
12. Light clients
13. Accessibility

**Approved by:** Marius Silaghi, Associate Professor

**Signature:** \_\_\_\_\_

**Date:** 01/30/2015