

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