

INTERNET TECHNOLOGIES

1. Introduction

Credits: 3-0-0

2. Course Outline

UNIT - I: Application Layer Protocols

HTTP, Proxy Servers, SMTP, POP, IMAP, SSH, FTP, Peer-to-Peer protocols such as BitTorrent, Distributed Hash Tables..

UNIT - II: Client-Side Technologies

HTML, CSS, PHP, JavaScript, XML, Document Object Model (DOM), Dynamic Content, Cookies.

UNIT - III: Connection to Server and Server-Side Technologies

Databases (MySQL/MongoDB) and JDBC, Servlets, JSP, NodeJS..

UNIT - IV: Advanced Client-Side Technologies

Asynchronous JavaScript and XML (AJAX), JQuery, JavaScript Object Notation (JSON), Google Web Toolkit, [Ruby on Rails], GoJS, Firebug.

UNIT - V: Advanced Web Applications

Search Engines and their algorithms, Google Maps and building your own Google Maps, Keyhole Markup Language (KML) on Google Earth.

3. Reading Material

Text Books

1. Core Servlets and Java Server Pages (JSP), by Marty Hall, Prentice Hall, 2nd edition (2003).
2. Processing XML with Java: A Guide to SAX, DOM, JDOM, JAXP, and TrAX by Elliottte Rusty Harold, Addison-Wesley Pub Co; 1st edition, 2002. (: Available online at <http://cafeconleche.org/books/xmljava/>)

References

1. <http://www.andrew.cmu.edu/user/mm6/95-733/schedule.html>
2. <http://cs.nyu.edu/courses/spring05/V22.0480-001/>
3. <http://web.stanford.edu/class/cs193c/lectures.html>
4. <http://www.sei.cmu.edu/library/assets/presentations/nelson-saturn2013.pdf>
5. <http://getfirebug.com/>
6. <http://gojs.net/latest/index.html>