



Course Syllabus

Course Code	Course Title	ECTS Credits
MIS-256	Web-based Applications Development	6
Prerequisites	Department	Semester
None	Management & MIS	Fall/Spring/Summer
Type of Course	Field	Language of Instruction
Required	MIS	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr. Despo Ktoridou	2 nd
Mode of Delivery	Work Placement	Corequisites
Face to Face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Provide a comprehensive introduction to web-based technologies.
- Provide an authoritative overview to a set of key technologies for building web applications (HTML, HTML5, JavaScript, Dynamic HTML, CSS, ASP, AJAX, and XML).
- Provide an overview of Web 2.0, its applications and Rich Internet Applications (RIA).
- Introduce a higher-order conceptual design, patterns view of the architecture and design of a dynamic business web application.
- Provide a comprehensive overview to web design alternatives: Platforms, Frameworks, Content Management Systems (WordPress implementation),

Learning Outcomes:

After completion of the course students are expected to be able to:

1. understand web-based technologies: (students will be provided with a comprehensive overview on: web-based technology; anatomy of web-based technology; evolution of web-based technology; examples and finally evolution of development tools)
2. understand the basics of key technologies for building Web Applications such as HTML, JavaScript, Dynamic HTML, CSS, ASP, PHP, AJAX, and XML): (students should be able to apply the above key technologies for developing light-weighted and rich-content Web applications)

3. understand the theoretical basics of Web 2.0, its implications and Rich Internet Applications (RIA): (students will acquire the necessary knowledge and understanding of Web 2.0: business aspects, Characteristics and Meme, Rich Internet Applications: Practices, Technologies, and Frameworks)
4. use higher-level conceptual design patterns for web-applications: (students will have the necessary knowledge and skills to design, develop and maintain a dynamic business web application)
5. understand the core information on:
 - web design alternatives: Platforms, Frameworks, Content Management Systems
 - the features, Content Management and Design, Administration and Security of WordPress

(students will have the necessary knowledge and skills to value CMS, build and deploy feature-rich, interactive business web applications in Microsoft environments using the Web Content Management Platform WordPress).

Course Content:

SECTION I: Introduction to web-based Technology

- Definition
- Anatomy
- Evolution
- Examples
- Evolution of development tools

SECTION II: Introduction to a set of Key Technologies for Building Web Apps

Introduction to: HTML and HTML5, JavaScript, CSS, ASP, PHP, AJAX, and XML

SECTION III(a): Web 2.0 Technologies

- Introduction to Web 2.0
- Business Aspects of Web 2.0
- Characteristics and Memes of Web 2.0
- Rich Internet Applications (RIA)
- Social Networks
- The IT infrastructure necessary to run WEB 2 applications, including Cloud Computing
- Web-Centric Development and Architectural Models

SECTION III(b): Rich Internet Applications RIA

- Rich Internet Applications: Practices, Technologies, and Frameworks
- What Exactly Is an RIA and Why Do We Care About It?
- A Techno-Business Tour Through the RIA Land
- Web 2.0 RIA Technologies, Standards, and Frameworks

SECTION IV: Design Principles for Building Business Web Applications

- Foundations of Business Web Application Design
- Patterns for Creating Winning Business Web Applications

SECTION V: Web Design Alternatives

- Platforms,
- Frameworks,
- Content Management Systems

SECTION VI: WordPress

- Why WordPress
- The WordPress Admin Dashboard & Bar
- WordPress setting
 - Pages and posts
 - Categories and tags
 - Plugins
 - Themes
 - Menus
 - SEO

Learning Activities and Teaching Methods:

Laboratorial work, Faculty Lectures and Guest-Lectures Seminars, Directed and Background Reading Case-studies, Student-led Presentations

Assessment Methods:

Project Presentation, Assignments, Test, Final Exam

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Professional WordPress: Design and Development, 3 rd Ed.	Brad Williams, David Damstra, Hal Stern	John Wiley & Sons, Inc.	2015	978-1-118-98724-7

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Intro to Web Application Development Environment http://www.extropia.com/tutorials/devenv/toc.html	Extropia The Open web technology company	Extropia	2013	n/a
Web Based Applications Development	Ralph F. Grove	Jones and Bartlett	2010	13:9780763759407