Course Syllabus

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

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:

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Publisher</th>
<th>Year</th>
<th>ISBN</th>
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Recommended Textbooks / Readings:

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<th>Author(s)</th>
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<th>Year</th>
<th>ISBN</th>
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<tr>
<td>Intro to Web Application Development Environment</td>
<td>Extropia The Open web technology company</td>
<td>Extropia</td>
<td>2013</td>
<td>n/a</td>
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<tr>
<td>Web Based Applications Development</td>
<td>Ralph F. Grove</td>
<td>Jones and Bartlett</td>
<td>2010</td>
<td>13:9780763759407</td>
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