



## Course Specification

**Course Name:** [Internet Applications ]

**Course Code:** IS345

### I. Basic Course Information

Major or minor element of program: Both Major and Minor  
Department offering the course: Information Systems Department

Academic level: [400 Level]

Semester in which course is offered: [First (fall) Semester]

Course pre-requisite(s): Internet Technology [IT223]

Credit Hours: 3

Contact Hours Through:

Lecture	Tutorial *	Practical *	Total
2.5	0.0	1.5	4.0

\* 1.5 hours for **either** Tutorial or Practical

Approval date of course specification: September 2014

### II. Overall Aims of Course

[The overall course objective is to provide the knowledge and skills a student needs to be a successful web developer, with a concentration on using Java-based technologies. ]

### III. Program ILOs covered by course

Program Intended Learning Outcomes (By Code)			
Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
[K4,K12,K20,K21,K23]	[I14,I18 ]	[P12,P14,P18,P21 ]	[G1,G2,G4 ]



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#### IV. Intended Learning Outcomes of Course (ILOs)

##### a. Knowledge and Understanding

On completing the course, students should be able to:

- K.1 Explain all major concepts related to designing and developing a web-based information system and associated communication and security issues.
- K.2 Recognize the main concepts of the JSP and Servlets.
- K.3 Describe EL and JSTL.
- K.4 Understand the Model-View-Controller pattern.
- K.5 State the basics of JavaScript and AJAX.

##### b. Intellectual/Cognitive Skills

On completing the course, students should be able to:

- I.1 Evaluate different technologies to implement a web application.
- I.2 Plan a web-based application scenario.

##### c. Practical/Professional Skills

On completing the course, students should be able to:

- P.1 Design and implement web applications with a database backend.
- P.2 Develop JSP and JSF pages.
- P.3 Utilize JavaScript and AJAX technologies properly.
- P.4 Develop applications using Google App Engine.

##### d. General and Transferable Skills

On completing the course, students should be able to:

- G.1 Apply analytical techniques in solving problems.
- G.2 Self-learn new computer tools.
- G.3 Form a team and work within a team.

#### V. Course Matrix Contents

	Main Topics / Chapters	Duration (Weeks)	Course ILOs Covered by Topic (By ILO Code)			
			K & U	I.S.	P.S.	G.S.
1-	Introduction to Web-based information systems	[1]	[K1]	[I1]	[]	[]
2-	JSP and Servlets	2	[K1, K2]	[I1, I2]	[P1, P2]	[All]
3-	Architecture and MVC	2	[K1, K4]	[I2]	[P1]	[All]
4-	Cookies and JavaBeans	1	[K1, K4]	[]	[P1, P2]	[All]
5-	MySQL & JDBC	1	[K1, K4]	[]	[P1, P2]	[All]
6-	EL & JSTL	1	[K3]	[]	[P2]	[All]
7-	Ajax	2	[K5]	[I1, I2]	[P2, P3]	[All]
8-	JSF	2	[K5]	[I1]	[P2, P3]	[All]
9-	Google App Engine	1	[K5]	[]	[P4]	[All]
	<b>Net Teaching Weeks</b>	<b>13</b>				



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VI. Course Weekly Detailed Topics / hours / ILOs

Week No.	Sub-Topics	Total Hours	Contact Hours	
			Theoretical Hours	Practical Hours *
1	Introduction to Web-based information systems	2.5	2.5	
2	JSP	4	2.5	1.5
3	Servlets	4	2.5	1.5
4	Architecture	4	2.5	1.5
5	MVC	4	2.5	1.5
6	Cookies and JavaBeans	4	2.5	1.5
7	<b>Midterm Exam</b>			
8	MySQL & JDBC	4	2.5	1.5
9	EL & JSTL	4	2.5	1.5
10	Ajax	4	2.5	1.5
11	Ajax	4	2.5	1.5
12	JSF	4	2.5	1.5
13	JSF	4	2.5	1.5
14	Google App Engine	4	2.5	1.5
15	<b>Final Exam</b>			
<b>Total Teaching Hours</b>		<b>51</b>	<b>33</b>	<b>18</b>

\* No Practical/Tutorial during the first week of the semester

VII. Teaching and Learning Methods

Teaching/Learning Method	Selected Method	Course ILOs Covered by Method (By ILO Code)			
		K & U	Intellectual Skills	Professional Skills	General Skills
Lectures & Seminars	<input checked="" type="checkbox"/>	[All]	[ ]	[ ]	[ ]
Tutorials	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Computer lab Sessions	<input checked="" type="checkbox"/>	[All]	[All]	[All]	[ ]
Practical lab Work	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Reading Materials	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Web-site Searches	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Research & Reporting	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Problem Solving / Problem-based Learning	<input checked="" type="checkbox"/>	[ ]	[ ]	[All]	[All]
Projects	<input checked="" type="checkbox"/>	[ ]	[All]	[All]	[All]
Independent Work	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Group Work	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Case Studies	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Presentations	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Simulation Analysis	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]
Others (Specify):	<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]



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VIII. Assessment Methods, Schedule and Grade Distribution

Assessment Method	Selected Method	Course ILOs Covered by Method (By ILO Code)				Assessment Weight / Percentage	Week No.
		K & U	I.S.	P.S.	G.S.		
Midterm Exam	<input checked="" type="checkbox"/>	All	All			10%	7
Final Exam	<input checked="" type="checkbox"/>	All	All			60%	15
Quizzes	<input type="checkbox"/>						
Course Work	<input checked="" type="checkbox"/>		All	All	All	10%	6,12
Report Writing	<input type="checkbox"/>						
Case Study Analysis	<input type="checkbox"/>						
Oral Presentations	<input type="checkbox"/>						
Practical	<input type="checkbox"/>						
Group Project	<input checked="" type="checkbox"/>		All	All	All	20%	13
Individual Project	<input type="checkbox"/>						
Others (Specify):	<input type="checkbox"/>						

IX. List of References

<b>Essential Text Books</b>	<ul style="list-style-type: none"> <li>Murach's Java Servlets and JSP (2nd Edition), by Joel Murach and Andrea Steelman, ISBN-13: 978-1-890774-44-8</li> </ul>
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X. Facilities required for teaching and learning

<p>List the facilities required</p> <ul style="list-style-type: none"> <li>Computer Lab with Computers equipped to run NetBeans, Java EE and MySQL. ]</li> </ul>
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**Course coordinator:** Dr. Ehab Ezzat and Dr. Mohamed Elwakil

**Head of Department:** Ass. Prof. Ehab Ezzat

**Date:** [September 2014]