

## Course Syllabus [CIS 423: Web-based Systems]

Academic Year (2014-2015) – [Second] Semester

### Instructor:

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### Course Information:

**Name:** Web-based Systems

**Course ID:** CIS 524

**Catalog Number:** 670264

**Credit Hours:** 3Hours

**Classroom Location & Class Time:**

| Day/Time         |         | 8-9 | 9-10                | 10-11 | 11-12               | 12:15-1:00         | 1-3                     |
|------------------|---------|-----|---------------------|-------|---------------------|--------------------|-------------------------|
| <b>Sunday</b>    | Lecture |     |                     |       |                     | <i>Office Hour</i> |                         |
|                  | Lab     |     |                     |       |                     |                    |                         |
| <b>Monday</b>    | Lecture |     | <b>G2</b><br>(6211) |       | <b>G1</b><br>(6205) | <i>Office Hour</i> |                         |
|                  | Lab     |     |                     |       |                     |                    |                         |
| <b>Tuesday</b>   | Lecture |     |                     |       |                     | <i>Office Hour</i> |                         |
|                  | Lab     |     |                     |       |                     |                    | <b>G1</b><br>(6102 - 1) |
| <b>Wednesday</b> | Lecture |     | <b>G2</b><br>(6211) |       | <b>G1</b><br>(6210) |                    |                         |
|                  | Lab     |     |                     |       |                     |                    | <b>G2</b><br>(6102 - 1) |
| <b>Thursday</b>  | Lecture |     |                     |       |                     |                    |                         |
|                  | Lab     |     |                     |       |                     |                    |                         |

### Course Prerequisites:

CIS 321: Database Concepts & Design

CIS 325: Network Protocols and E-Commerce

### Text Book and Materials:

Harvey Deitel, Abbey Deitel, “**Internet and World Wide Web How To Program (Harvey & Paul Deitel & Associates)**” Publisher: Prentice Hall, 2012, 5/E, ISBN-10: 0132151006, ISBN-13: 9780132151009.

### Reference Book:

- Marty Stepp et al. “Web Programming Step by Step, 2nd Edition” , Publisher: Step by Step Publishing, 2012, ISBN-10: 110557878X, ISBN-13: 9781105578786
- Nicholas C. Zakas “Professional JavaScript for Web Developers”, ISBN-10: 1118026691 | ISBN-13: 978-1118026694 | Publication Date: January 18, 2012 | Edition: 3
- Allaramaju, Subrahmanyam “Professional Java Server Programming J2EE: 1.3” WROX Press Ltd, 2001, ISBN-10: 1861005377, ISBN-13: 978-1861005373
- [Thomas A. Powell](#), “[HTML: The Complete Reference](#)”, McGRAW-Hill, 2000, Edition 3<sup>rd</sup> ,ISBN-10: 0072129514, ISBN-13: 978-0072129519

### References:

- <http://www.learnphp.co>
- <http://www.codecademy.com/learn>
- <http://www.tutorialspoint.com/php/>
- <https://phpacademy.org>
- <https://phpbestpractices.org>
- <http://www.tuxradar.com/practicalphp>
- <http://www.phphtherightway.com>
- For papers on Web Development: ACM & IEEE Online Journals for research papers

### Course Description:

Overview of web based application, setup and configuration of web server, setup and configuration of eclipse and MySQL, Introduction to HTML: Basic Tags, Tables, Lists, Form, Frames, Images, Hyper links, Introduction to JDBC: Drivers, Types of Drivers, Connection pooling, Java Server; Pages: Scriplet, Expression, Declaration, JDBC & JSP, Implicit JSP Objects, Introduction to XML; Introduction to JavaScript: JavaScript Popup Boxes, Functions, Events, Objects, Web Security and credit card Transactions; Web Performance: Packaging and Deployment, Internationalization and localization. Java Servlet, Parameter externalization..

### Course Objectives:

By the end of this course, you should be able to:

1. To develop and apply powerful tools to retrieve information from the Internet.
2. To understand modern text indexing methods,
3. Know how to design e-commerce sites
4. Know how to help Educators to use the web to support their own teaching,
5. Know how to build a Web based Education system,
6. To assign projects involving Web-based search engines,
7. To focus on development tools such as Java, JSP, ERVLET, XML, HTML, JavaScript, etc.

### E-Mail

All students are requested to obtain an e-mail account. If you have any questions about the course or need assistance, please contact me in person, by telephone during office hours, or by e-mail at any time.

### Class Policies:

Instruction in this course is provided through demonstration and discussion. Class time will be provided for practicing concepts as well as working through assignments; however, *additional time outside of class will be essential* to improve skills and complete the assignments.

### Grading and Evaluation Criteria

Your course grade will be calculated as follows:

| Criteria                                       | Percentage  |
|--|-------------|
| Assignments/ Quizzes Evaluation*               | 10%         |
| Participation                                  | 5%          |
| Project (including all scheduled milestones)** | 15%         |
| Midterm  | 25%         |
| Final Lab                                      | 15%         |
| Final Written Exam                             | 30%         |
| <b>TOTAL</b>                                   | <b>100%</b> |

#### \*Integration of Homework's & Quizzes Evaluation:

After each homework/assignment submission, a quiz will be conducted to evaluate the skill acquired by the coursework the student has submitted.

#### \*\*Project Evaluation:

The project's work should be divided equally between all team members. Each team must consist of 4 students including the leader. Each student must participate in the project and do her best to learn from such experience. Any work that is programmed by a person who isn't a member of the team may lead the whole team to get an (F) not only in the project but in the whole course. Each student must be responsible for her own part implementation on one hand. On other hand, each student is responsible for integrating her work within the whole project development along with her partners.

### Week Course Outline

Over the course of the semester we cover the knowledge and skills necessary to evolve simple static websites into dynamic, database-driven web applications. Students learn how to use the popular XAMP/Wamp framework (Windows, Apache, MySQL, and PHP), in combination with JavaScript (+ Ajax), CSS, and HTML5 to develop their own robust online programs.

~ May Be Subject to Minor Changes ~

| Week | Date             | Chapter Reading s | Topics  | Deliverables: Assignments/ Projects    | Exams/ Quizzes | Objectives |
|------|------------------|-------------------|---|--|----------------|------------|
| 1    | 26-30 Jan 2014   | 1                 | <b>Introduction to CIS 423: Web-based Systems + Term's Project Discussion</b> | -                                      |                | 1          |
| 2    | 2 - 6 Feb 2014   | 2                 | <b>HTML (Part#1)</b>  |  |                | 1,2,7      |
| 3    | 9 - 13 Feb 2014  | 3                 | <b>HTML (Part#2)</b>  | <b>Milestone (1): Project Proposal</b> |                | 1,2,7      |
| 4    | 16 - 20 Feb 2014 | 4-5               | <b>CSS</b>  | <b>HW1</b>                             |                | 1,2,7      |

| Week  | Date                     | Chapter Reading s | Topics  | Deliverables: Assignments/ Projects  | Exams/ Quizzes                               | Objectives |
|-------|--------------------------|-------------------|---|--|--|------------|
| 5     | 23 – 27 Feb 2014         | 17<br>19<br>18    | Introduction to <b>PHP (Part#1)</b><br><i>Understanding the Environment</i> |  | <b>Quiz (1)</b> on Introduction, HTML, & CSS | 1-7        |
| 6     | 2 – 6 March 2014         |                   | <b>PHP (Part#2):</b> Forms Processing & Business Logic                      | <b>Milestone (2):</b> (Project's Web pages' Interface Design + Databases Schema + Sequence/ Transition Diagrams) |  | 1-7        |
| 7     | 9 – 13 March 2014        |                   | <b>PHP (Part#3):</b> working with Databases                                 | <b>HW2</b>   |  | 1-7        |
| 8     | 16 – 20 March 2014       |                   | <b>PHP (Part#4):</b> Working with files, sessions, & cookies                |  | <b>Quiz (2)</b> on <b>PHP</b>                | 1-7        |
| 9     | 30 – 3 March/ April 2014 |                   | <b>PHP (Part#5):</b> Error Handling   | <b>Milestone (3):</b> 60% implementation of the project  |  | 1-7        |
| 10    | 6 – 10 April 2014        | 6-8               | <b>JavaScript(Part#1)</b> Introduction + Control Statements                 | <b>Midterm</b> on all content of weeks (1-8)   |  | 1-7        |
| 11    | 13 – 17 April 2014       | 9-10              | <b>JavaScript(Part#2)</b> Functions & Arrays                                |  |  | 1-7        |
| 12    | 20 – 24 April 2014       | 11                | <b>JavaScript(Part#3)</b> Objects   | <b>HW3</b>   |  | 1-7        |
| 13    | 27 – 1 April/May 2014    | 15                | XML   |  | <b>Quiz (3)</b> on <b>JavaScript</b>         | 1-7        |
| 14    | 4 – 8 May 2014           | 16                | AJAX  | <b>Milestone (4): Final Project Submission</b>   |  | 1-7        |
| 15    | 11 – 15 May 2014         |                   | AJAX  | <i>Final Project Demos for all groups</i>  | <b>Final Lab Exam</b>                        | 1-7        |
| 16    | 18 – 22 May 2014         |                   | <i>Revision</i>   |  |  |            |
| 17/18 | <b>TBA</b>               | <b>FINAL EXAM</b> |   |  |  |            |

*Your instructor reserves the right to make changes to the syllabus as needed. It is the student's responsibility to ensure they have the most current syllabus from the course's website*

### **ATTENDANCE POLICY**

**The following policy should replace all the previous announced rules.**

1. Regular students must attend at least 75% of all lectures, labs, and tutorials. Any student with less than 75% attendance in a course will result of being barred from entering the final exam.
  - a. Any student barred from entering a final exam for failure to meet the attendance policy will automatically fail the course. Class work grades will be recorded, and the student will receive an overall grade of barred (DN).

على الطالب المنتظم حضور المحاضرات والدروس العملية ويحرم من دخول الاختبار النهائي فيها إذا قلت نسبة حضوره عن النسبة التي يحددها مجلس الجامعة، على ألا تقل عن (٧٥٪) من المحاضرات والدروس العملية المحددة لكل مقرر خلال الفصل الدراسي، ويُعدّ الطالب الذي حرم من دخول الاختبار بسبب الغياب راسباً في المقرر، ويرصد له تقدير محروم (ح) أو (DN).

- b. Attendance will be taken for all regular weeks as shown in the University academic calendar.
2. A student absent from a lecture, lab, or a tutorial due to medical excuse or any other emergencies must submit an official excused document to the office of Vice Dean for Academic Affairs within one week of the absent day.
  - a. This applies to any quiz, midterm exam, or a final exam that the student missed during the absent date.
  - b. Once the Office of Vice Dean for Academic Affairs receives the excused document, it will evaluate it and notify the instructor of the decision whether it is accepted or not.
  - c. The submitted document must be an official stamped medical record from governmental or respectful hospitals.
3. For a course with a lab section:
  - a. If the student is absent 25% from the lecture section then he/she will be barred from the final exam (see item # 1 above).
  - b. If the student is absent 25% from the lab section then he/she will be barred from entering the lab final exam.
  - c. Barred from the final exam for the lecture section will result in failing the course regardless of student's standing and absent status for the lab section.
4. Students must be prompt attending the class per the time specified in the class schedule.
  - a. Every two tardiness are equivalent to one absent.
  - b. A tardy more than ½ hour from the start of the class is considered one absent.
5. The lists of barred students will be announced after the last official day of regular lectures.

All assignments must be completed and handed in on time at the **beginning** of class. Work must be **complete**. I will not accept a partially completed assignment. Late work will be accepted on a case-by-case basis only. Your work **must** be your **own**. Cheating will result in a grade of 0 for the applicable assignment; further disciplinary action, including assigning a failing grade (F) for the entire course, may also be taken or even more according to the UoD regulations. Missed work will result in a grade of 0 for the assignment. Exceptional circumstances should be discussed with the instructor in advance.

Any assignment is due at the **beginning** of class on the due date. Each day late will result in a 10% reduction in grade and will not be accepted after five days unless we have spoken about the circumstances and prior arrangements have been made.

Assignments must be submitted as a **softcopy** through **Blackboard VLE only** + **printed out** (when appropriate) and **properly identified**. Each printout must include:

- Your *Name*
- The *Course ID, Assignment* and/or *File Name*

## LAB COMPONENT

The lab part of this course will provide the ability to design and build and manage a dynamic Web application using major programming and scripting languages such as PHP. A project will accompany the lab and its milestones are designed to reinforce the course concepts through active & cooperative learning.

The selected software for this semester is: **Netbeans** which can be downloaded from here (for free): <https://netbeans.org/>. Guidance on how to install and work with Web applications' development will be discussed through lectures.

### *Similar Software:*

- <http://www.notepad-plus-plus.org/>
- <http://www.sublimetext.com/2>
- <http://writecodeonline.com/php/>
- [Eclipse](#)
- [PHPStorm](#) (Free for educational use)
- [Bracket](#)

### **Instructor's Policy and academic integrity:**

- Students are required to attend every class. If a student is absent for 15% of the classes student will receive a warning letter. If the absence reaches 25%, student will not be allowed to take the Final Examination.
- Students are expected to treat the classroom as a professional environment and treat students and faculty with respect. At a minimum, I expect you to treat each other (and your instructor) politely and with respect. This includes turning off all cell phones (or muting them), participating in class, and arriving in a timely manner. Please remember that personal conversations during lecture and lab time are distracting to your fellow students. Collaboration on a project is an exception, of course.
- Students are expected to observe academic integrity. Cheating of any type will not be tolerated. Students will submit their own work, if other people words are used, Proper bibliographic citation is required.

- Students will not take part in any unethical activity to improve or maintain their academic standing. This includes but not limited to; cheating, copying, Plagiarizing (presenting the work of others as your own). These unethical activities will lead to a grade of “F” in this course.
- Copying an assignment from another student in this class will lead to an automatic failure for this course and to a disciplinary action. Allowing another student to copy one's work will be treated as an act of academic dishonesty, leading to the same penalty as copying.

### **Student Preparation for Each Class:**

- Read the text chapters assigned per the schedule.
- Review objectives from the chapters.
- Make note of any questions you may have to pose during class or via e-mail.
- Visit the companion Web site to complete Web research projects, complete online study guide quizzes, and review other material.
- Optional: browse the online PowerPoint presentations for class.

### **PLAGRISM POLICY**

University of Dammam considers academic honesty to be one of its highest values. Students are expected to be the sole authors of their work. Use of another person's work or ideas must be accompanied by specific citations and references.

### ***BLACKBOARD System:***

- You will be expected to regularly check your email/blackboard course page for any announcement or information, at least the day before the lecture.
- Expect me to upload the lecture slides a day before the starting class to the blackboard system.
- Use the discussion board on Blackboard for any question or enquiry regarding any of the course requirements with your classmates and not for any other subject.
- If you have any questions about the course or need assistance, please contact me in person during office hours or by e-mail at any time. I will not reply to any email not including the student's name.
- Some announced assignments and quizzes will be carried out through Blackboard system.
- In exams, I will test your knowledge and understanding. When you learn some topics, try not only to memorize the information but to understand it.