



**Dr Brahim Medjahed**

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Office Hours:            Tuesday 10am – 11am  
                                 Tuesday 12:30pm – 3:30pm  
                                 Thursday 10am – 11am  
                                 Thursday 5pm – 6pm  
                                 Or by appointment

Course Meeting Times:  
                                 Thursday 6pm - 8:45pm, PEC 1410

**Course Description:**

In this course, we study the major concepts and techniques for enabling Web service based interactions on the Web. The objective is to familiarize the students with the recent trends in industry and academia to address Web service research issues. The course will address various aspects of Web services including the SOAP Services, WSDL, REST services, Web service composition, BPEL4WS, cloud services, security in Web services, WS-Security, privacy in Web services, Web Service Coordination, WS-Coordination, WS-Transactions.

**Program Goals:**

MS in Computer and Information Science: click [here](#).

MS in Software Engineering: click [here](#).

**Course Objectives**

- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
- An ability to analyze a problem and identify and define the computing requirements appropriate to its solution
- An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs

- An ability to apply design and development principles in the construction of computer-based systems of varying complexity
- An ability to formulate problems, design experiments, collect, verify, validate, analyze, and interpret data and use this knowledge to design a reliable system, component, or process to meet requirements
- An ability to use the techniques, skills, and modern software tools necessary for reliable and robust software engineering practice

## **University Attendance Policy**

A student is expected to attend every class and laboratory for which he or she has registered. Each instructor may make known to the student his or her policy with respect to absences in the course. It is the student's responsibility to be aware of this policy. The instructor makes the final decision to excuse or not to excuse an absence. An instructor is entitled to give a failing grade (E) for excessive absences or an Unofficial Drop (UE) for a student who stops attending class at some point during the semester.

## **Academic Integrity**

The University of Michigan-Dearborn values academic honesty and integrity. Each student has a responsibility to understand, accept, and comply with the University's standards of academic conduct as set forth by the Code of Academic Conduct ([http://www.umd.umich.edu/policies\\_st-rights/](http://www.umd.umich.edu/policies_st-rights/)), as well as policies established by each college. Cheating, collusion, misconduct, fabrication, and plagiarism are considered serious offenses, and may be monitored using tools including but not limited to TurnItIn. Violations can result in penalties up to and including expulsion from the University. At the instructor's discretion, the penalty may be a grade of zero on the assignment up to and including recommending that the student be expelled from the University. It is the sole responsibility of the student to understand and follow academic guidelines regarding plagiarism. The University of Michigan-Dearborn has an online academic integrity tutorial that can be accessed at <http://webapps.umd.umich.edu/aim>.

## **Disability Statement**

The University will make reasonable accommodations for persons with documented disabilities. Students need to register with Disability Resource Services (DRS) every semester they are enrolled for classes. DRS is located in Counseling & Support Services, 2157 UC. To be assured of having services when they are needed, students should register no later than the end of the add/drop deadline of each term. Visit the DRS website at: [http://www.umd.umich.edu/cs\\_disability/](http://www.umd.umich.edu/cs_disability/). If you have a disability that necessitates an accommodation or adjustment to the academic requirements stated in this syllabus, you must register with DRS as described above and notify your professor. Upon receipt of your written notification, we will make accommodations as directed by DRS.

## **Safety**

All students are strongly encouraged to register in the campus Emergency Alert System, used to communicate with the campus community during an emergency. More information on the system and how it works, along with enrollment information can be found at: <http://umemergencyalert.umd.umich.edu/> Please note that the system will only communicate through UM-Dearborn email accounts, so if you primarily use a non-university account you should forward your UM-Dearborn email to your primary account.

All students are also encouraged to program 911 and UM-Dearborn's Public Safety phone number (313) 593-5333 into personal cell phones. In case of emergency, first dial 911 and then if the situation allows call UM-Dearborn Public Safety.

### **Canvas:**

A course website has been created in Canvas (the online course management system). You are automatically granted access to this site as a result of your enrollment in the course. To access the site, you need to go to <http://canvas.umd.umich.edu/>, and login using your username and Kerberos password. If you do not know your username and/or Kerberos password you can contact Information Technology Services (<http://umdearborn.edu/its/>).

### **Required Materials and/or Technology:**

- There is NO required text for this course. The instructor will provide reading material throughout the semester.

### **Grading Distribution:**

Projects (total of 2)	50%
Midterm	25%
Final Exam	25%
<b>Total</b>	<b>100%</b>

### **Grading Scale:**

The following is the grading scale for the course:

• $\geq 95$	A+
• $< 95$ and $\geq 93$	A
• $< 93$ and $\geq 90$	A-
• $< 90$ and $\geq 87$	B+
• $< 87$ and $\geq 83$	B
• $< 83$ and $\geq 80$	B-
• $< 80$ and $\geq 77$	C+
• $< 77$ and $\geq 73$	C
• $< 73$ and $\geq 70$	C-

- <70 and >= 65 D+
- <65 and >= 60 D
- <60 E

### Course Outline (Tentative):

The instructor reserves the right to modify the schedule to improve the execution of this course.

Week	Date	Topic	Notes
1	Jan 12	Chapter 1: XML, DTDs, XML Schema	Project 1 posted
2	Jan 19	Chapter 2: SOAP and REST Services	
3	Jan 26	Chapter 3: Web Service Security	
4	Feb 2	Chapter 4: Web Service Composition Chapter	
5	Feb 9	Chapter 5: BPEL Language for Web Service Composition	
6	Feb 16	Chapter 6: Service Coordination Protocols	
7	Feb 23	<u>Project 1 Demo</u>	Project 1 Due Project 2 Posted
8	March 2	<u>Spring Recess (No Class)</u>	
9	March 9	Chapter 7: WS-Coordination Framework (cont'd)	
10	March 16	<u>Midterm</u>	
11	March 23	Chapter 8: Transactional Support for Web Services	
12	March 30	Chapter 8: Transactional Support for Web Services (cont'd)	
13	April 6	Chapter 9 – Policy Specification for Web Services	
14	April 13	Chapter 10 – Cloud Services	
15	April 20	<u>Project 2 Demo</u>	Project 2 Due
16	Thursday April 27	<u>Final Exam (6:30pm – 9:30pm)</u>	

### Course Policy:

The instructor reserves the right to modify policies to improve the execution of this course.

- Lecture notes and announcements will be posted on Canvas. Please read your email regularly for announcements.
- You are expected to return your assignments at the due date/time. **Late assignments will NOT be accepted.**
- Cell phones must be turned off during lectures. If you are unwilling to turn your phone off, do not bring it to class. If you are observed using your phone during class, you will be asked to leave. It is not permitted to use headphones, ear buds, etc. during lectures. You may use a computer to take notes during lecture. Use of your computer for purposes not directly related

to CIS 571 is not permitted (for example, email, watching videos, etc.). If you are observed doing so, you will be asked to leave the class.

- If there are mistakes in grading your homework assignment, project, or exam, please contact me within a week after the return of your work. The entire work will be graded again and the new grade will replace the original one, whether the new grade is higher or lower than the original grade.