

## **Cmp Sci 4750/5750 – Cloud Computing**

**Department of Mathematics and Computer Science**  
**Fall 2018**

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Office Hrs	MW 4:00pm – 5:30pm Any other time by appointment
Prerequisites	Cmp Sci 2750

**Course Description** This course provides an introduction to development and deployment of applications in the cloud space. It touches on different aspects of cloud computing such as IaaS, PaaS, and SaaS. It includes significant discussion on legal and security aspects of clouds in the marketplace. It may also include public, private, and hybrid clouds, and Internet of Things.

### **Required text**

- Michael Kavis. *Architecting the Cloud*. Wiley. 2014.
- Foster and Gannon. *Cloud Computing for Science and Engineering*. MIT Press. 2017.

**Topics** We'll discuss the development and deployment of applications in the cloud space. We'll look at different aspects of cloud computing such as IaaS, PaaS, and SaaS. We'll also talk about the legal and security aspects of clouds in the marketplace. Different topics covered in the course are described below:

- Introduction
- Cloud models/architecture
- Choosing a cloud service model
- Auditing in the cloud
- Security design in the cloud
- Disaster recovery planning

**Outcomes** At the end of this course, you are expected to understand different technical and legal aspects of working with the cloud. You should be able to create the architecture for an application to be deployed in the cloud.

**Email requirements:** All correspondence should be made through your UMSL-provided email. Please use the class email list on Canvas for communications. Any unsigned email and email not in plain text will go unanswered by me. Please do not send me any attachments without talking to me first.

**Attendance** I'll expect you to be present in most of the classes. I will not be taking attendance but if you start missing too many classes, please take responsibility for your absence, specially when it concerns tests and homeworks. When you come to class, you must change your cell phones to silent mode. If your cell phone rings during the test, I'll deduct 10% points from that test score for you. If you are more than ten minutes late, please try to not disrupt the class. I'll penalize you by one letter grade for habitually coming late to class (more than five times I notice you coming late).

**Projects/Homeworks** Projects and homeworks will be submitted electronically and will be due at 11:59pm on the due date. Assignments should be submitted on `delmar`. You should start working on the projects/assignments as soon as they are assigned as you may not be able to access the cloud at all times because of physical distance and different domain. Do not hesitate to ask questions in class, in my office, or over email, especially if you do not have an idea on how to start working on the project.

**Grading** The grade will be based on assignments and two tests. Each assignment must be meticulously documented and clearly identify its purpose, author, and date. I will like to *read* your submitted code; I should *not have to figure it out*. If you miss any test or assignment without making prior arrangements, you will have a zero. I will not give any make up tests. The distribution of grades will be as follows:

Assignments and Projects	50% (40% for grad students)
Two Tests	25% each

For graduate students, 10% of their grade will be based on a class presentation on a topic they will have to research. Make sure that the topic is approved by me.

Failure to hand in any assignment will result in an automatic zero for that assignment. If some student is unable to hand in an assignment by the deadline, he/she must discuss it with me *before* the deadline. I'll encourage you to talk to other students regarding homework but you should not collaborate to the extent that two submissions are copies of each other. If you are found copying an assignment (from another student or internet), or if your submission has *unreasonable similarity* to another submission, you get a zero for that assignment automatically. A second offense will be reported to the University officials and students involved will face serious consequences. I may ask you to come to my office and explain your code to me; in case you are not able to explain the code to my satisfaction, I'll assign you a zero in that project.

**Miscellaneous** If you have any disability that requires an accommodation (as per UMSL policy), you must notify me in advance. If you cannot attend the class due to a religious holiday or a university-sanctioned event, please let me know in advance as well. In case you are down with the flu, please stay absent from the class till you recover, and contact me via phone or email. I'll try my best to make accommodation for you in that case.

You have an account on one of the Unix machines on campus (`delmar`) and you should use it for all assignments. Any assignment that fails to run on `delmar` automatically gets a zero. The lecture notes and old tests are available on the class web page in PDF format. You may want to print the lecture notes before you come to class.

## Exam Dates

Test 1	October 17, 2018
Test 2	December 05, 2018

There is no final exam. In case of class cancellation due to weather-related or other campus emergency on the day of a test, the test will be held in the following class period. For the second test, if the campus is closed on December 05, the alternative date will be the day after the scheduled date; possibly in the conference room of the department.

## Other important dates

August 26, 2018	Last day to enroll in the course
September 18, 2018	Last day to drop without receiving a grade
November 12, 2018	Last day to drop the course with instructor approval

Anyone desiring an EXC grade after October 31, 2018 must be passing the course at that point to get EXC.

## UMSL Course Policies

### 1. Participation (expectations)

- It is vitally important that our classroom environment promote the respectful exchange of ideas. This entails being sensitive to the views and beliefs expressed during discussions whether in class or online. Please speak with me before recording any class activity. It is a violation of University of Missouri policy to distribute such recordings without my authorization and the permission of others who are recorded.
- Turn off sound on beepers, cell phones, and other devices during class. Adherence to the Student Conduct Code is expected.
- I am committed to insuring a positive learning environment by respecting that University policy (p. 66): <http://www.ums1.edu/~studentplanner/index.html>.
- Your success in this course will heavily depend on your ability to communicate, engage and participate in all course activities. Successful completion of this course requires that a student keep up with all assignments, quizzes, projects and tests.
- If you are unable to participate in the scheduled class activities, you must notify the instructor within the week of that class module. **An unexcused failure to engage or participate with the class will be counted as an absence; unexcused absences may result in failure.** The instructor reserves the right to make judgment to accept and/or makeup assignments missed because of failed participation in the course activities.

### 2. Academic Integrity/Plagiarism

- Students are responsible for being attentive to and observant of campus policies about academic honesty as stated in the University's Student Conduct Code (p. 60): <http://www.ums1.edu/~studentplanner/index.html>
- To avoid accusations of academic dishonesty, please submit all written work to the Turnitin system before finalizing what you submit for evaluation. Check information about The Writing Center @UMSL that is linked to MyGateway Home.
- Plagiarism is the use of another persons words or ideas without crediting that person. Plagiarism and cheating will not be tolerated and may lead to failure on an assignment, in the class, and dismissal from the University. View this campus policy here: <http://www.ums1.edu/services/academic/policy/academic-dishonesty.html>

### 3. Mandatory Reporting: Under Title IX, all UMSL faculty, staff, and administrators (with limited exception) are obligated to report any incidents of sexual harassment, sexual misconduct, sexual assault, or gender discrimination to the Student Affairs office and/or other University officials. This ensures that all parties are protected from further abuses and that victim(s) are supported by trained counselors and professionals. Note: There are several offices at UMSL (e.g., Counseling Services, Health Services, Community Psychological Service, Center for Trauma Recovery, and Student Social Services) whose staff are exempt from Title IX mandated reporting, when the information is learned in the course of a confidential communication.

#### 4. Access, Disability and Communication

- Students who have a health condition or disability, which may require accommodations in order to participate effectively in this course, should contact the **Disability Access Services Office**. Information about your disability is confidential.
  - 144 Millennium Student Center
  - Phone: (314) 516-6554
  - Website: <http://www.ums1.edu/services/disabled/>
- If you have difficulty communicating in English with the instructor of this course, contact the **Office of International Students and Scholar Services**:
  - Phone: (314) 516-5229
  - Email: [iss@ums1.edu](mailto:iss@ums1.edu)
  - Website: <http://www.ums1.edu/~intelstu/index.html>

### Student Support and Services

#### ● Technical Support

- My Gateway (Blackboard): If you have problems logging into your online course, or an issue within the course site, please contact the **Technology Support Center**:
  - \* Phone: (314) 516-6034
  - \* Email: [helpdesk@ums1.edu](mailto:helpdesk@ums1.edu)
  - \* Website: <http://www.ums1.edu/technology/tsc/>
- Wimba: If you have any questions regarding Wimba Classroom and Wimba Voice Tools, contact the Faculty Resource Center:
  - \* Phone: (314) 516-6704
  - \* Email: [frc@ums1.edu](mailto:frc@ums1.edu)
  - \* Website: <http://www.ums1.edu/technology/frc/>
  - \* Outside normal office hours, you may also contact Wimba for 24/7 assistance:
    - Phone: (866) 350-4978
    - Email: [technicalsupport@wimba.com](mailto:technicalsupport@wimba.com)

#### ● Academic Support

- **The Online Writing Lab**: At our My Gateway site, students can send their papers to our tutors, who will read them and send them back with suggestions. Students can also access SafeAssign, which identifies quoted material in their essays.
  - \* Visit the online Writing Lab page on MyGateway to submit drafts online.
  - \* We try to respond within 48 hours, but it may take longer, so allow ample time.
- **NetTutor**: Online tutoring in many subjects is now available through NetTutor<sup>®</sup>. In your courses on MyGateway, click on Tools and select NetTutor<sup>®</sup> to log in.

#### ● Student Services

- The Student Retention Services office offers assistance tailored to specific student needs.

- \* 225 Millennium Student Center
- \* Phone: (314) 516-5300
- \* Email: [umslsrs@umsl.edu](mailto:umslsrs@umsl.edu)
- \* Website: <http://www.umsl.edu/services/srs/>
- Departmental Tutoring
  - The department offers tutoring for up to Cmp Sci 3130, and occasionally for other courses
  - Check MyGateway organization CSTutoring.