

COMP 4/6302: Web Services and the Internet – Spring 2022

Dr. Mike Nolen

Contact Information:

Office: By Appointment	Department Office: Dunn Hall 375
Phone:	Department Phone: 901.678.5465
Email: mnolen@memphis.edu or Mnolen9@gmail.com	Grader/TA: none

Office Hours:

By Appointment

Lecture Meeting Times/Locations:

7:10 - 8:40 Tues/Thurs Dunn 103

Catalog Description:

COMP 4/6302: Web Services and the Internet: From early Distributed Systems to Service Oriented Architecture, Software as a Service. Transitioning from method invocation (RMI/RPC) to platform independent communication (JSON, XML). Communication layers and protocols. Java EE Technology in creating highly scalable application servers. Describing services and exposing web layer APIs(WSDL/REST). Supporting Authentication and Authorization. Separation of Concerns development. Modern Web using Javascript. A background in Java, databases and networking is needed.

Course Text:

Martin Kalin, *Java Web Services Up and Running*, 2nd Edition (used as a reference)

Assignments:

This is a lecture class with home work. You must use Eclipse projects when turning in your source code. This makes it easier to streamline grading. You will also need to submit as part of your code, connection string config files for making connections between servers.

Attendance:

Attendance doesn't officially count towards your final grade, but it's crucial that you attend class regularly. Announcements and assignments will be made in class but not necessarily through email.

Email:

Please check your University of Memphis email account at least once a day, as that is my primary means of communicating with you outside of class. Please always use your UofM email when sending emails to me, which in turn will be forwarded to my gmail address.

Late/Makeup Policy:

All assignments are expected to be completed and turned in on schedule. Due dates will be clearly indicated for each assignment. Late assignments are NOT accepted except in extreme circumstances. Likewise, makeup exams will be given only under extreme circumstances. If you feel that your circumstances warrant a late work submission or a makeup exam, get in touch with me as soon as possible and we will discuss.

Plagiarism/Cheating Policy:

An essential part of learning how to program is getting plenty of practice with it yourself. As such, all labs for this class (unless specifically indicated otherwise) are expected to be individual efforts. If I determine that you have copied another student's assignment, this will happen to both you and the person from whom you copied. The incident may also be forwarded to the University Judicial Affairs Office for further disciplinary action. Please don't put me in this situation.

Student Disabilities:

If you have a disability that may require assistance or accommodations, or if you have any questions related to any accommodation for testing, note taking, reading, etc., please speak with me as soon as possible. You must contact the Student Disability Services Office (678-2880) to officially request such accommodations / services.

Evaluation:

Home Work Assignments	50%
Mid Term Exam	20%
Final Exam	30%

Grading Scale: Letter grades will be determined as follows:

CS 4302

A+: 96-100%; **A**: 90-95%

B+: 87-89%; **B**: 81-86%; **B-**: 79-80%

C+: 77-78%; **C**: 71-76%; **C-**: 69-70%

D+: 67-68%; **D**: 60-66%

F: Below 60%

CS 6302

May have an extra question or two on exams

Required Tools:

- Java 1.8.0_311 (latest)
- Eclipse Build id: 20211202 (ver 2021-12)
- Tomcat Server 8.5
- MySQL 8.0.27 and Workbench
- SOAPUI 5.7.0 (this version will be used in class)

Tentative Course Schedule:

- M. L. King, Jr. Holiday: **January 17, 2022 / Monday**
- First Day of Classes: **January 18, 2022 / Tuesday**
- Spring Break: **March 7-13, 2022 / Monday-Sunday**
- Last Day of Classes: **April 27, 2022 / Wednesday**
- Study Day: **April 28, 2022 / Thursday**
- Exams week: **April 29 - May 5, 2022 / Friday-Thursday (Final is on 5/3)**

Date	Lecture Material	Assignments
1/18	Course introduction	
1/20	Web/Internet History	
1/25	Networking and Internet (IPC)	
1/27	HTTP and HTML	
2/1	HTML and JavaScript	
2/3	Javascript Continued	
2/8	Into. To Web Services	
2/10	Application Servers / Servlets (java)	
2/15	REST Web service (Server Side)	Assignment 1 – REST Web Service
2/17	REST Web service (Server Side) Continued In class example	
2/22	JSON/XML Parsing, SOAP UI Example	
2/24	REST Web service (Client Side)	
3/1	REST Web service (Client Side) In class example and Review	
3/3	Mid Term Test	
3/8	Spring Break	
3/10	Spring Break	
3/15	SOA (Service Oriented Architecture)	Assignment 2 – REST Client
3/17	Web Service Description Language (WSDL), SOAP UI Example	
3/22	SOAP Server side	
3/24	SOAP Server side, Continued, In class example	
3/29	SOAP Client side	Assignment 3 – SOAP Web Service
3/31	SOAP Client side, Continued, In class example	
4/5	Servlets, REST, SOAP Comparison	
4/7	Java Messaging Service	
4/12	SAAS (Software as a Service) or Micro Services	Assignment 4 – SOAP Client
4/14	Web Service Security (HTTPS)	
4/19	Web Service Security (HTTPS) (Cont.) Java Libraries	
4/21	Javascript Libraries (Cont.)	
4/26	Review for Final	
4/28	No class Study Day	
5/3	Final Exam	