

COMP 4/6302: Web Services and the Internet – Spring 2018

Dr. Mike Nolen

Contact Information:

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Office Hours:

By Appointment

Lecture Meeting Times/Locations:

5:30 - 7:00 Tues/Thurs FIT 226

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 API's(WSDL/REST). Supporting Authentication and Authorization. Separation of Concerns development. Modern Web using Javascript. A background in Java, databases and networking is needed.

Required Text:

Martin Kalin, *Java Web Services Up and Running*, 2nd Edition

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.

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:

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| 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%

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May have an extra question or two on exams

Required Tools:

- Latest JDK and JRE
- Eclipse for Java EE Developers
- Tomcat Server 8.x (do not use 9.x)
- MySQL Community Server and Workbench

Tentative Course Schedule:

| Date | Lecture Material | Assignments |
|--------------|--|-------------------------------------|
| 1/16 1/18 | Course introduction | |
| 1/23 1/25 | Web/Internet History Networking and Internet (IPC) | |
| 1/30 2/1 | HTTP and HTML HTML and JavaScript | Assignment 1 – set up Web server |
| 2/6 2/8 | Javascript Continued Into. To Web Services | |
| 2/13 2/15 | Application Servers / Servlets (java) / DB Review REST Web service (Server Side) | |
| 2/20 2/22 | JSON/XML Parsing REST (Client Side) | Assignment 2 – REST Web service |
| 2/27 3/1 | Review Mid Term Test | |
| 3/6 3/8 | Spring Break Spring Break | |
| 3/13 3/15 | SOA (Service Oriented Architecture) Web Service Description Language (WSDL, UDDI) | |
| 3/20 3/22 | Simple Object Access Protocol (SOAP) Server side SOAP Cont'd (Client side) | Assignment 3 – SOAP Web service |
| 3/27 3/29 | Java Application Servers Web Service Security (HTTPS) | |
| 4/3 4/5 | SAAS (Software as a Service) Publisher/Subscription Model | |
| 4/10 4/12 | Java Messaging Service Node Environment | Assignment 4 – To be determined |
| 4/17 4/19 | Node API Servers Javascript Libraries | |
| 4/24 4/26 | Review No class Study Day | |
| 5/1 | Final Exam | |