44-563 Developing Web Applications and Services
Course Syllabus – Fall 2015

Instructor	Course Location and Time
For Sections 01, 04 & 05:	Colden Hall 1200
Tanmay Bhowmik, Ph.D.	
Email: bhowmik@nwmissouri.edu	Section 01
Phone: 660-562-1103	M W F 8:00am - 8:50am
Office: Colden Hall 2305	
Office Hours:	Section 02
Tuesday 8:30am-10:30am, 3:30pm-4:30pm	M W F 9:00am - 9:50am
Wednesday 9:00am-10:00am	Section 03
Thursday 8:30am-10:30am, 3:30pm-4:30pm	M W F 10:00am - 10:50am
	Section 04
For Sections 02 & 03:	M W F 11:00am - 11:50am
Dong Si, Ph.D.	
Email: dongsi@nwmissouri.edu	Section 05
Phone: 660-562-1764	M W 3:30pm – 4:45pm
Office: Colden Hall 2147	**Course Website**
Office Hours:	You should have access to the
Monday 2:30-3:30pm,	eCompanion page for this course. In
Tuesday 9:00-11:00am & 12:30-3:30pm,	case the regular site is down, go to
Wednesday 2:30-3:30pm	www.northwestOnline.org

Course Description: Technologies and protocols supporting web applications and web services. Students gain experience in client-side and server-side programming.

Prerequisites: 44-241 (Computer Programming II) and 44-460 (Database Systems), each with a grade of C or better.

Course Objectives: In this course, students will
- Implement client-side applications using HTML, CSS, JavaScript, jQuery and AJAX
- Represent information using XML and JSON
- Implement web applications using Java-based tools such as servlets, JavaServer Pages and JavaServer Faces
- Access databases using Java Persistence
- Implement both JAX-RS and JAX-WS web services and clients

Textbooks: *No textbooks are required. All course materials will be available on the course web site.*

Recommended Online Tutorials

- Oracle's Java EE Tutorial: https://docs.oracle.com/javaee/7/tutorial/

http://docs.oracle.com/javase/tutorial/
http://docs.oracle.com/javase/8/docs/
- Netbeans tutorials: http://netbeans.org/
  https://netbeans.org/kb/docs/java/quickstart.html
- W3Schools tutorials: http://www.w3schools.com/

Software: Students must have access to

- Microsoft Word and PowerPoint
- Java SE 8
- NetBeans 8.0 or later (Java EE bundle or All bundle)
- Web browsers (Chrome, Firefox, IE, Safari)

Announcements and E-Mail: Announcements are communicated via the **Announcements** page on the course eCompanion website and your Northwest Missouri State University e-mail account. It is your responsibility to check each of these sources daily. E-mails *must* include the course number (44-563) and be signed.

Professionalism: Students are expected to behave in a professional manner in their dealings with each other, the teaching assistants, and the instructor.

Personal Electronic Devices: Laptops and other electronic devices should be used in a responsible manner that does not interfere with the lecture or other students' ability to learn. Cellular phones, pagers, walkmans, gameboys, mp3 players, PSP's, and other electronic devices that produce auditory stimuli should be turned off or silenced during the classes. No calculators, cell phones, or other electronic devices can be used during exams, unless explicitly allowed by the instructor.

Use of Publicly-Available PCs: All code that you store on a hard drive in a public lab or classroom must be moved to your student storage or a flash drive when you leave the PC. Hard drive space is not intended for private storage.

Academic Honesty: The policy stated in the Northwest Missouri State University Undergraduate Catalog will be followed. The *CSIS Academic Integrity Policy* available at http://www.nwmissouri.edu/mathcsis/about.htm clearly explains those types of behavior that would be considered academic dishonesty. It is also posted on the course website. You are responsible for reading this document and abiding by the guidelines described therein. **Read the student agreement, sign it by typing in your name and the date in the locations specified. Then drop it in the Student Agreement dropbox by 11:59 p.m. on Tuesday, September 8. This is REQUIRED. If the document is not submitted by the due date, five points will be deducted from your total points in the course.**

Projects:

- You may discuss projects with other students in the class, but **you MUST create and submit your own Netbeans projects and source files. SUBMITTING A FILE COPIED FROM ANOTHER STUDENT CONSTITUTES ACADEMIC DISHONESTY.**

- Projects must be submitted to the Dropbox on Northwest Online by 11:59 p.m. on the due date. **Projects submitted late will receive no credit**.

Disability Accommodations: Students in this course who need disability accommodations/modifications should present a copy of their official Northwest accommodation letter from the LAP/S Committee to the instructor during private office hours as early in the term as possible. Additional information can be found online at http://www.nwmissouri.edu/swd/index.htm

Statement of Non-Discrimination: Northwest Missouri State University does not discriminate on the basis of race, color, creed, religion, national origin, sex, age, or handicap in admission or access to, or treatment or employment in, its programs and activities. Any person having inquiries concerning Northwest Missouri State University's compliance with the regulations implementing Equal Employment Opportunity Commission (EEOC) and Americans with Disabilities Act (ADA) guidelines is directed to contact the President's Office, Northwest Missouri State University, 800 University Drive, Maryville, MO 64468-6001, (660) 562-1110. Any person may also contact the Assistant Secretary for Civil Rights, U.S. Department of Education, regarding the institution's compliance with the regulations implementing EEOC and ADA guidelines.

Attendance: You are expected to attend all class meetings, arrive on time, and actively participate in all activities during class. Note that the lab sessions are an integral part of the class and attendance at lab sessions is required. Attendance will be taken almost in every class and lab. The CSIS attendance policy is posted on the course website. You are responsible for reading this document and abiding by the guidelines described therein. **If you miss more than 3 classes, you need to meet the graduate program director Dr. Douglas Hawley and discuss your absence.**

Exam Policies: Dates and other details will appear in course announcements. Tentative dates age given in the detailed calendar (see the syllabus).

Occasionally students miss examinations. Sometimes the student knows about these absences in advance, and sometimes they happen unexpectedly.

- If you know in advance that you will be absent during an exam, then you must meet with the instructor **and** the graduate program director Dr. Douglas Hawley before the date of the exam and discuss the cause of absence. If the cause seems reasonable (e.g., legitimate emergency, medical, and university approved absences), then the absence will be excused and arrangements will be made for a make-up exam. Note that documentation is required to support the cause.

- If you miss an exam unexpectedly and wish to have the absence considered excused, then you must meet with the instructor **and** the graduate program director Dr. Douglas Hawley at the earliest opportunity possible after the absence, and provide documentation to support your claim that the absence should be considered excused. If the absence is excused, arrangements for a make-up exam will be made for you.

- Exams missed with an excused absence will be dealt with on an individual basis.

- **Make-up exams will be considered only for excused absences, and for that you will need to provide valid documentations (as mentioned above).**

For unexcused absences from examinations, you will unfortunately receive a *score of zero* points.

The contacts for our graduate program director Dr. Douglas Hawley is as follows.

Dr. Douglas Hawley
Email: hawley@nwmissouri.edu
Office: 2260 Colden Hall
Phone: 660.562.1200

All exams are closed book, closed notes, unless explicitly noted in writing by the instructor.

No calculators, cell phones, or other electronic devices can be used during exams, unless explicitly allowed by the instructor.

Grade of Incomplete (I): Following Northwest Missouri State University policy, incomplete grades may only be given in extreme circumstances, such as illness, death in a student's immediate family, or similar circumstances beyond a student's control, and the student was unable to complete a small portion of the course work.

Northwest Online Helpdesk for eCollege and eConferencing Software
Hours: 24/7/365
E-mail: helpdesk@northwestonline.org
Phone: 877.740.2213

Northwest Missouri State University Helpdesk for general questions on campus computer, software, and networking
Hours: Monday-Thursday 8-9; Friday 8-5
E-mail: helpdesk@nwmissouri.edu
Phone: 660.562.1634

Grading Policy

Component
3 Exams @ 100 pts each
Final Exam 100 pts
Approximately 13 Projects @ 3 pts each

Your score on each component will be posted in the online gradebook as soon as that component has been graded. You are responsible for checking the gradebook at least once a week to ensure that your grades are properly posted. *If there is an error in grading, you must bring that to the attention of the class assistant or instructor within two weeks of the time the grade is posted.*

To satisfy the university policy that graduate students in 500-level courses must have requirements beyond those of the undergraduate students, a different grading scale is used for undergraduate and graduate students.

Grading Scale – UNDERGRADUATES		Grading Scale – GRADUATES	
Percent Range	Grade	Percent Range	Grade
88-100%	A	90-100%	A
>= 78% and < 88%	B	>= 80% and < 90%	B
>= 70% and < 78%	C	>= 70% and < 80%	C
>= 60% and < 70%	D	>= 60% and < 70%	D
below 60%	F	below 60%	F

Throughout the semester, a student will be graded for 439 points in total. Therefore, after the final exam, if the total point of an undergraduate student is 390, then the corresponding final grade is: (390/439)*100 = 88.83%, which is an A. Whereas, for a graduate student, the corresponding final grade is a B.

Disclaimer: The course instructor reserves the right to adjust this syllabus upon subsequent consideration of student performance, schedule constraints, unexpected semester events, and other such situations. If changes are required, they will be posted on course web site.

Course Outline

For exam dates and project due dates, check the announcements on the course web site.

Unit	Topics
1	Introduction, HTML, CSS, Responsive Web Design
2	JavaScript, jQuery
3	XML, Namespaces, DTDs, Schemas
4	Servlets, Sessions
5	AJAX
6	JSON
7	JavaServer Pages, MVC, Expression Language, JSTL
8	JavaServer Faces, Page Navigation, Internationalization, Validation, Facelets Templates

9	Persistence
10	Introduction to Web Services, JAX-RS Web Services
11	JAX-WS Web Services

Important Dates

Mon, Aug 31: Classes begin

Mon, Sep 7: Labor Day Holiday--No class

Mon, Oct 19: Midterm grade due by 10:00am

Fri, Oct 23: Walk-out Day--No class

Wed, Nov 25 to Fri, Nov 27: Thanksgiving Break--No class

Visit http://www.nwmissouri.edu/academics/calendar.htm for more information.

Final Exam Date and Time

Venue: Regular Classroom

Section 01 (Class time M W F 8:00am - 8:50am): **Thursday, Dec 17, 7:30am – 9:30am**

Section 02 (Class time M W F 9:00am - 9:50am): **Tuesday, Dec. 15, 4:10 pm - 6:10 pm**

Section 03 (Class time M W F 10:00am - 10:50am): **Wednesday, Dec. 16, 2:00 pm - 4:00 pm**

Section 04 (Class time M W F 11:00am - 11:50am): **Monday, Dec 14, 7:30am – 9:30am**

Section 05 (Class time M W 3:30pm – 4:45pm): **Tuesday, Dec 15, 2:00pm to 4:00pm**

Visit http://www.nwmissouri.edu/registrar/finals.htm for more information.

44-563 Sections 01, 02, 03, and 04
Detailed Course Calendar (Fall 2015)

All dates are **tentative**. **The instructor may adjust the schedule as the semester progresses.**

Week	Class Date	Events	Topics
1	Mon, Aug 31		Introduction
	Wed, Sep 2		HTML
	Fri, Sep 4	**Lab**	CSS
2	Mon, Sep 7	**Labor Day –** No Class	Responsive Web Design JavaScript jQuery XML (start)
	Wed, Sep 9	**Due –** Project 01 (by 11:59 pm)	
	Fri, Sep 11	**Lab**	
3	Mon, Sep 14		
	Wed, Sep 16	**Due –** Project 02 (by 11:59 pm)	
	Fri, Sep 18	**Lab**	
4	Mon, Sep 21		
	Wed, Sep 23	**Due –** Project 03 (by 11:59 pm)	
	Fri, Sep 25	**Lab**	
5	Mon, Sep 28	**Exam 1**	XML (continued) Namespaces DTDs Schemas Servlets
	Wed, Sep 30	**Due –** Project 04 (by 11:59 pm)	
	Fri, Oct 2	**Lab**	
6	Mon, Oct 5		
	Wed, Oct 7	**Due –** Project 05 (by 11:59 pm)	
	Fri, Oct 9	**Lab**	
7	Mon, Oct 12		Sessions AJAX JSON
	Wed, Oct 14	**Due –** Project 06 (by 11:59 pm)	
	Fri, Oct 16	**Lab**	
8	Mon, Oct 19		
	Wed, Oct 21	**Due –** Project 07 (by 11:59 pm)	
	Fri, Oct 23	**Walk-out Day –** No Class	
9	Mon, Oct 26	**Exam 2**	
	Wed, Oct 28	**Due –** Project 08 (by 11:59 pm)	
	Fri, Oct 30		
10	Mon, Nov 2		JavaServer Pages MVC Expression Labguage JSTL JavaServer Faces Page Navigation Internationalization Validation
	Wed, Nov 4	**Due –** Project 09 (by 11:59 pm)	
	Fri, Nov 6	**Lab**	
11	Mon, Nov 9		
	Wed, Nov 11	**Due –** Project 10 (by 11:59 pm)	
	Fri, Nov 13	**Lab**	
12	Mon, Nov 16		

	Wed, Nov 18	**Due –** Project 11 (by 11:59 pm)	Facelets Templates Persistence
	Fri, Nov 20	**Lab**	
13	Mon, Nov 23	**Exam 3**	
	Wed, Nov 25	**Thanksgiving Break –** No class	
	Fri, Nov 27		
14	Mon, Nov 30		Introduction to Web Services JAX-RS Web Services JAX-WS Web Services
	Wed, Dec 2	**Due –** Project 12 (by 11:59 pm)	
	Fri, Dec 4	**Lab**	
15	Mon, Dec 7		
	Wed, Dec 9	**Due –** Project 13 (by 11:59 pm)	
	Fri, Dec 11		

44-563 Section 05
Detailed Course Calendar (Fall 2015)

All dates are **tentative**. **The instructor may adjust the schedule as the semester progresses.**

Week	Class Dates	Events	Topics
1	Mon, Aug 31		Introduction HTML CSS
	Wed, Sep 2	**Lab –** Last 50 minutes	
2	Mon, Sep 7	**Labor Day –** No Class	Responsive Web Design JavaScript jQuery XML (start)
	Wed, Sep 9	**Lab –** Last 50 minutes **Due –** Project 01 (by 11:59 pm)	
3	Mon, Sep 14		
	Wed, Sep 16	**Lab –** Last 50 minutes **Due –** Project 02 (by 11:59 pm)	
4	Mon, Sep 21		
	Wed, Sep 23	**Lab –** Last 50 minutes **Due –** Project 03 (by 11:59 pm)	
5	Mon, Sep 28	**Exam 1**	XML (continued) Namespaces DTDs Schemas Servlets
	Wed, Sep 30	**Lab –** Last 50 minutes **Due –** Project 04 (by 11:59 pm)	
6	Mon, Oct 5		
	Wed, Oct 7	**Lab –** Last 50 minutes **Due –** Project 05 (by 11:59 pm)	
7	Mon, Oct 12		Sessions AJAX JSON
	Wed, Oct 14	**Lab –** Last 50 minutes **Due –** Project 06 (by 11:59 pm)	
8	Mon, Oct 19		
	Wed, Oct 21	**Lab –** Last 50 minutes **Due –** Project 07 (by 11:59 pm)	

9	Mon, Oct 26	Exam 2	
	Wed, Oct 28	Due – Project 08 (by 11:59 pm)	
10	Mon, Nov 2		JavaServer Pages MVC Expression Language JSTL JavaServer Faces Page Navigation Internationalization Validation
	Wed, Nov 4	Lab – Last 50 minutes Due – Project 09 (by 11:59 pm)	
11	Mon, Nov 9		
	Wed, Nov 11	Lab – Last 50 minutes Due – Project 10 (by 11:59 pm)	
12	Mon, Nov 16		Facelets Templates Persistence
	Wed, Nov 18	Lab – Last 50 minutes Due – Project 11 (by 11:59 pm)	
13	Mon, Nov 23	Exam 3	
	Wed, Nov 25	Thanksgiving Break – No class	
14	Mon, Nov 30		Introduction to Web Services JAX-RS Web Services JAX-WS Web Services
	Wed, Dec 2	Lab – Last 50 minutes Due – Project 12 (by 11:59 pm)	
15	Mon, Dec 7		
	Wed, Dec 9	Lab – Last 50 minutes Due – Project 13 (by 11:59 pm)	