USF Sarasota-Manatee College of Hospitality and Technology Leadership
COP 4260 – 3 Credit Hours
CRN 92271 Section 521
Systems Programming: Java EE
Fall 2014, USF Sarasota-Manatee

Instructor: Patricia Roy
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Office:
Office Telephone:
Office Hours:

Classroom: Virtual class via Elluminate
Time: Monday, 3:00 PM – 5:50 PM

PREREQUISITES: COP 2250

COURSE DESCRIPTION: This course covers Java EE, the Enterprise Java Platform. Java EE is a super-set of Java SE. This platform has matured to a degree where it can be both complete and lightweight, while, at the same time incorporating many new and enhanced tools.

COURSE TOPICS:
This course will cover the following content areas:
1. Enterprise JavaBeans
2. Session Beans
3. JavaServer Faces
4. Java Servlets
5. Java Persistence
6. Object-Relational Mapping
7. Java Message Service
8. SOAP Web Services
9. RESTful Web Services

COURSE OBJECTIVES:
In today’s business world, applications need to access data, apply business logic, add presentation layers, and communicate with external systems.

Java EE appeared at the end of the 1990s and brought to the Java language a robust software platform for enterprise development. Challenged at each new version, badly understood or misused, over-engineered, and competing with open-source frameworks J2EE was seen as a heavyweight technology. Java EE benefited from these criticisms and is today focused on simplicity.

Open standards are collectively one of the main strengths of Java EE. Open source is another of Java EEs strengths. This is also consistent with the philosophy underlying our programs.
This course explores the innovations of Java EE, and examines the various specifications and how to assemble them to develop applications. This course is also the “fulcrum” of the Specialization in Enterprise Architecture and Application Development.

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MISSION STATEMENT:** The mission of the Information Technology Program is to provide high quality educational opportunities for students interested in pursuing careers in the broad range of fields that support our computer/information-based society and economy. Additionally, the goal is to utilize the resources of the program to provide service to society; and to emphasize to students the need for lifelong learning, to have ethical conduct, and an understanding of the diverse social context in which Information Technology is practiced.

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAM LEARNING OUTCOMES** (PLOs):

1. Demonstrate technical knowledge and skill sets (computational and analytic) needed for success in careers related to Information Technology.
2. Demonstrate an understanding of professional ethics in the development and application of Information Technology.
3. Design and develop computer processes and systems of advanced complexity.
4. Assess the potential value of new technologies and see possibly beneficial applications.
5. Conduct computer research, organize a structured presentation, and deliver it in a way that communicates to novice users as well as computer experts.

**COURSE STUDENT LEARNING OUTCOMES:**
Upon completion of this course, students will be able to:

1. Describe Java EE essentials and the tools that make it work
2. Describe the persistent tier of Java EE, using JPA
3. How to develop a transaction business logic layer, using EJBs
4. How to develop a presentation Layer, using JSF
5. How to build Web pages with JSF and Facelet components
6. How to interact with an EJB back end and navigate through pages
7. Differentiate between ways to interoperate with other systems, including how to exchange asynchronous messages with Java Message Service (JMS)
8. How to develop both SOAP Web Services and RESTful Web Services.

**TEXT AND MATERIALS**

A. Texts:


   Eric Jendrock et al, The Java EE 7 Tutorial. (found online at [http://docs.oracle.com/javaee/7/tutorial/doc/home.htm](http://docs.oracle.com/javaee/7/tutorial/doc/home.htm))

GRADING, EVALUATION AND ATTENDANCE POLICIES:
Synchronous class attendance is optional. Nevertheless, students are responsible for all of the material discussed in class. If you cannot attend class synchronously, then you must view the recording of the class session in a timely manner. Note that the course moves through the material at a rapid pace, and each topic builds on the ones that preceded it.

Student performance will be evaluated based on weekly programming assignments and a final project submitted to the Instructor via Canvas.

Each exercise will be graded out of a maximum value of ten (20) points. The final project will be graded out of a maximum value of one hundred (100) points. The final grade will be based on the total score of the grades (normalized to a percentage).

A grade will be determined based on the total of possible points earned, as follows: A 90-100; B 80-89; C 70-79; D 60-69; F 0-59.

Extra Credit
There will be no extra credit.

Incomplete Grade
An Incomplete grade is reserved for those with good reason for having missed a small amount of work, and must be agreed by the student and instructor during the course as circumstances require. Otherwise, exams not taken or assignments not turned in will receive a zero grade and will be counted in the final grade accordingly. Please note that it is the student’s responsibility to ensure that work is completed before the end of the following semester and the Incomplete changed to a regular grade. If this is not done before the end of the following semester, the Incomplete automatically becomes an F. A grade of I (incomplete) will only be given in extreme circumstances with documented proof for this grade. A student must have a grade of 70% or better for an incomplete.

Attendance Policy
CLASS ATTENDANCE IS OPTIONAL. Attendance is automatically recorded by Elluminate. Due to the highly interactive nature of the course and its subject matter, students are strongly encouraged to attend the live sessions. Material covered in class will not necessarily be contained in the textbook. Falling behind in assignments will affect students’ grades. Students are responsible for material covered in class, any announcements, schedule changes, etc. Absenteeism is not an excuse for late work or missed exams unless approval from your Instructor is obtained in advance. Sessions are recorded and will be made available to students after the class.

The last day to drop a course with a grade of “W” is November 1. There will be no refund and no academic penalty.
USFSM Policies

A. Academic Dishonesty: The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the catalog, USFSM Undergraduate Catalog or USFSM Graduate Catalog, the USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

B. Academic Disruption: The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the catalog: USFSM Undergraduate Catalog or USFSM Graduate Catalog, USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

C. Contingency Plans: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: CANVAS, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor CANVAS site for each class for course specific communication, and the main USFSM and College websites, emails, and MoBull messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the Safety Preparedness Website for further information.

D. Disabilities Accommodation: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714, disabilityservices@sar.usf.edu; http://www.usfsm.edu/students/disability.

E. Fire Alarm Instructions: At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See Emergency Evacuation Procedures.

F. Religious Observances: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

G. Web Portal Information: Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and CANVAS course information via that address.

GENERAL INSTRUCTION FOR STUDENTS
Students are not permitted to take notes or tape lectures for the purpose of sale. This includes Elluminate recordings.

Microsoft Office may be used to supplement this course. The online course tools package, which may be accessed from campus computer labs and via the Internet at https://my.usf.edu, will be used to enhance the course. Internet access and a reasonable up-to-date web browser are required. Except for response speed, there should be no difference in functionality between accessing from a lab and from home. Any exceptions to this will be announced as they become apparent.

**NOTE:**
The instructor reserves the right to make adjustments to this syllabus as necessary.
**COURSE SCHEDULE:** Please note this is a tentative schedule – some shifting could occur as we progress into the semester.

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<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Assignment Due</th>
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| August 25   | Class Introductions  
Syllabus Review  
Readings:  
The Java EE 7 Tutorial Chapter 1 – “Overview”  
Beginning Java EE 7 Chapter 1 – “Java EE 7 at a Glance”  
The Java EE 7 Tutorial Chapter 7 – “Using JavaServer Faces Technology in Web Pages”  
Core JavaServer Faces Chapter 1 – “Getting Started”  
Core JavaServer Faces Chapter 2 – “Managed Beans” |                |
| September 1 | HOLIDAY - Labor Day                                                   |                |
| September 8 | Readings:  
Core JavaServer Faces Chapter 3 – “Navigation”  
Core JavaServer Faces Chapter 4 - “Standard JSF Tags” | Assignment 1  |
| September 15| Readings:  
Core JavaServer Faces Chapter 5 – “Facelets”  
The Java EE 7 Tutorial Chapter 8 – “Introduction to Facelets” | Assignment 2  |
| September 22| Readings:  
Core JavaServer Faces Chapter 6 – “Data Tables”  
The Java EE 7 Tutorial Chapter 10 – “Using JavaServer Faces Technology in Web Pages”  
Beginning Java EE 7 Chapter 10 – “JavaServer Faces” | Assignment 3  |
| September 29| Readings:  
Core JavaServer Faces Chapter 7 – “Conversion and Validation”  
Core JavaServer Faces Chapter 8 – “Event Handling”  
The Java EE 7 Tutorial Chapter 11 – “Using Converters, Listeners, and Validators” | Assignment 4  |
| October 6   | Readings:  
The Java EE 7 Tutorial Chapter 17 – “JavaServlet Technology”       | Assignment 5  |
| October 13  | Readings:  
The Java EE 7 Tutorial Chapter 4 – “Injection”  
Beginning Java EE 7 Chapter 2 – “Context and Dependency Injection” | Assignment 6  |
| October 20  | Readings:  
Beginning Java EE 7 Chapter 4 – “Java Persistence API”  
Beginning Java EE 7 Chapter 5 – “Object-Relational Mapping”  
Beginning Java EE 7 Chapter 6 – “Managing Persistent Objects”  
The Java EE 7 Tutorial Chapter 37 – “Introduction to the Java Persistence API” | Assignment 7  |
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<th>Date</th>
<th>Readings</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>October 27</td>
<td>The Java EE 7 Tutorial Chapter 39 – “The Java Persistence Query Language” Note: Columbus Day is NOT observed</td>
<td>Assignment 8</td>
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<tr>
<td>November 10</td>
<td>The Java EE 7 Tutorial Chapter 21 – “Introduction to Web Services” The Java EE 7 Tutorial Chapter 22 – “Building Web Services with JAX-RS” Beginning Java EE 7 Chapter 14 – “SOAP Web Services”</td>
<td>Assignment 10</td>
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<tr>
<td>November 17</td>
<td>The Java EE 7 Tutorial Chapter 23 – “Building RESTful Web Services with JAX-RS” Beginning Java EE 7 Chapter 15 – “RESTful Web Services”</td>
<td>Assignment 11</td>
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<td>November 28</td>
<td>Beginning Java EE 7 Chapter 13 – “Messaging” The Java EE 7 Tutorial Chapter 42 – “Java Message Service Concepts”</td>
<td>Assignment 12</td>
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<td>December 1</td>
<td>Topics TBA</td>
<td>Assignment 13</td>
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<tr>
<td>December 8</td>
<td><strong>Final Project due</strong></td>
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