Academic Year 2013-2014

Appendix A

New Jersey Council of County Colleges

Request for Review of a New, Revised, or Reactivated Credit Course

Essex County College
College

February 21, 2014
Date

Dr. Edwin L. Knox,
Vice President for
Academic Affairs/CAO
Contact Person

973-877-4473
Telephone

Check One: New Course: X Change in Credit Hours: _____ Change in Course Title: _____ or

Course from Inactive List: _____

Course Number: CSC 237

Course Title: Enterprise Java Programming

Lecture Credit Hours: [1] 3.0

Lab Credit Hours: [1] 3.0

Studio/Performance Credit Hours: [1] _____

Cooperative Education/Internship/Field Study/Practicum/Clinical Contact Hours:[2] _____

State Fundable Credit Hours: 4.0

3. One credit hour for each hour per week for 15 weeks of lecture plus one credit for every two hours per week for 15 weeks of formally scheduled laboratory or studio/performance hours for art, music, dance, etc. (or the equivalent attained by scheduling more minutes of class activity per week for fewer weeks in the semester).
4. A minimum of 45 contact hours must be completed by a student during a semester or term to earn one (1) credit for practical experiences such as cooperative education, internships, field study, practicum, or clinical experiences.

Course Description [include description from the catalog AND any other descriptive information that supports the data indicated above (number of lecture hours, number of lab hours, etc.)]:

This course continues effective hands on instruction in the Java object-oriented language. Topics may include object-oriented design solutions, exception handling, manipulating files and databases, and graphical user interfaces, multimedia based application and network application. Students will build Java Platform, Enterprise Edition (Java EE) applications that use Enterprise JavaBeans (EJB) and the Java Persistence API (JPA) a layered architectural framework.

ESSEX COUNTY COLLEGE
DEPARTMENT
COURSE OUTLINE

COURSE DESIGNATION: CSC 237
COURSE TITLE: Enterprise Java Programming

NUMBER OF CREDITS: 4

CONTACT HOURS: 4 LECTURE: 4 LAB: OTHER (Specify):

PREREQUISITES: CSC 137 or Placement
CONCURRENT COURSES: None
COREQUISITES: None

CATALOG DESCRIPTION: This course continues effective hands on instruction in the Java object-oriented language that was begun in CSC137. Topics may include object-oriented design solutions, exception handling, manipulating files and databases, and graphical user interfaces, multimedia based application and network application. Students will build Java Platform, Enterprise Edition (Java EE) applications that use Enterprise JavaBeans (EJB) and the Java Persistence API (JPA) a layered architectural framework.

GENERAL EDUCATION GOALS: N/A

COURSE OBJECTIVES:

After completing this course, you should be able to:

1) State the purpose and value of using the Enterprise JavaBean
2) (EJB) technology
3) Describe the Java EE 5 application architecture
4) Use annotation-based development for EJBs
5) Explain the relationship between annotations in code and deployment descriptor files
6) Define and use dependency injection and resource injection
7) Develop and test the various types of EJBs (stateless session, stateful session, or message-driven) and Java Persistence API(JPA) entities
8) Use Java persistence query language (JPQL)
9) Perform object-to-relational mappings (ORM) for persistent data
10) Implement persistent entities with associations
11) Integrate an application with messaging using message-driven beans
12) Use EJB timers and interceptors
13) Leverage container services for transaction management

14) Create and test EJB clients
15) Create Web services from EJBs
16) Apply recommended practices in EJB design and implementation
17) Use IBM Rational Application Developer to develop and test an EJB 3 application
18) Deploy an EJB -based application to WebSphere Application Server

COURSE CONTENT OUTLINE:

Based on the text *Developing EJB 3 Applications for WebSphere Application Server V7* by IBM. NOTE: The actual textbook may vary and the amount of time spent on each topic may also vary depending on the class and the instructor.

1) Course introduction
2) Java EE architecture
3) Introduction to EJB
4) Session EJBs
5) The library case study
6) Strategies for testing EJBs
7) EJB clients
8) Introduction to the Java Persistence API (JPA)
9) Object-relational mapping with JPA
10) Java Persistence Query Language (JPQL)
11) Message-driven beans
12) Managing transactions in EJBs
13) EJB 3 timers and interceptors
14) EJBs as Web services
15) EJB security
16) Deployment to WebSphere Application Server

METHODS OF INSTRUCTION:

Instructor presents technical material in formal lectures and class discussion. Concepts will be reinforced through laboratory exercises and programming projects.

COURSE REQUIREMENTS:
(e.g., minimum number of assignments, exams, papers, etc.)

Attendance:

Students are expected to attend ALL lectures and ALL lab sessions and punctuality is required. Late arrivals interfere with the learning process and will reflect negatively on final averages in the "Assignments, class participation, Lab Reports and Lab Quizes" grading category.

Laboratory:
Students are expected to attend every lab and to maximize use of lab time. Late students, arriving after explanation of that day's procedures have been given, will not be permitted to stay for lab. Lab works provide students with "hands on" experiences which are vital for learning the material presented in the course. Each Laboratory will require a laboratory report that is due at the beginning of the lab the following week. Format for these will be discussed in the laboratory.

Quizes:
There will be several laboratory quizzes during the semester, which will be announced one week in advance. A student who arrives after the lab quiz has begun will not be permitted to take the quiz.

Programming Projects:
Non-trivial Projects will be assigned during the latter part of the course after students have absorbed a significant amount of course material. These projects will be worth 35% of your final grade. Students will be given laboratory time to work on the projects, but it is expected that additional work will be done outside of the assigned time. The lab will be open at posted scheduled times during the semester once each project is assigned.

Comprehensive Examinations
There will be comprehensive midterm (15%) and final (25%) examinations given during midpoint and last week of the course. They will test all material covered up to then in the course and will be worth 15% + 25% = 40% of the overall course grade. These exams must be taken when scheduled. Makeup exams will only be given when a valid excuse is accepted by the instructor.

METHOD OF EVALUATION:
(specific method required should be explicitly listed)

Grading Category	% of Final Average
Midterm examination	15%
Final examination	25%
Assignments, class participation, Lab Reports and Lab Quizes	25%
Programming Projects	35%