

**NEWARK COLLEGE OF ENGINEERING**

**SYLLABUS AND COURSE INFORMATION**

- Course Name:** Technology Applications of Object-Oriented Programming
- Course Number:** ECET 444
- Course Structure:** 2-2-3 (lecture hr/wk – lab hr/wk – course credits)
- Course Description:** Brings together prior software knowledge and applies it to develop modern software applications. Comprised of theory and hands-on applications in the lab. Concepts in modular/structured design and object-oriented design will be combined to develop modern internet and database connected applications. Examine several case studies during the last few weeks. Design, construct, and test a practical software project.
- Prerequisites:** ECET 344
- Corequisites:** None
- Required, Elective, or Selected Elective:** Elective
- Required Materials:** **Text:** Name: Programming with Java  
Author: Julia Bradley, Anita Millspaugh  
Year: 2001  
ISBN: 978-0-07-248819-7
- Course Outcomes:** By the end of the course students are able to:
1. Write, test, and troubleshoot basic programs containing a user interface in a modern object oriented programming language.
  2. Design software user interfaces.
  3. Demonstrate and develop modular, structured, and reusable code.
  4. Write software that can store and retrieve information from Internet connected sources such as web services and databases.
  5. Complete a long-term software project.
  6. Generate professional software use manuals and code documentation.
- Class Topics:** Object Oriented Programing    Relational Databases  
Web Services                            User Interfaces  
Software Documentation            Code Reuse  
End User Documentation

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**Student Outcomes:** The Course Learning Outcomes support achievement of the following Student Outcomes from the ETAC of ABET Criterion 3 requirements.

**Student Outcome d:** An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.

**Related Course Learning Outcomes:** 1, 2, & 4

**Student Outcome l:** The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems.

**Related Course Learning Outcomes:** 2, 3, & 4

**Student Outcome n:** The ability to analyze, design, and implement one or more of the following: control systems, instrumentation systems, communications systems, computer systems, or power systems.

**Related Course Learning Outcomes:** 4

**Student Outcome o:** The ability to apply project management techniques to electrical/electronic(s) systems.

**Related Course Learning Outcomes:** 5 & 6

**Academic Integrity:** NJIT has a zero-tolerance policy regarding cheating of any kind and student behavior that is disruptive to a learning environment. Any incidents will be immediately reported to the Dean of Students. Please visit the Dean of Students website at <http://www.njit.edu/doss> for a list of student policies relating to academic integrity and student conduct.

**Modification to Course:** The Course Outline may be modified at the discretion of the instructor or in the event of extenuating circumstances. Students will be notified in class of any changes to the Course Outline.

**Prepared By:** Daniel Brateris

**Course Coordinator:** Daniel Brateris