

**Bergen Community College  
Course Syllabus  
Information Technology**

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**Course Title:**

INF-268 Advanced Java Programming

**Credits/Hours:**

3 credits/2 hours lecture, 2-hour lab.

**Pre-requisite:**

INF-153 Java Programming

**Course Description:**

This course continues effective hands-on instruction in the Java object-oriented, high-level programming language. Topics may include advanced array manipulation, object-oriented design solutions, exception handling, manipulating files and databases, Swing and graphical user interfaces, multimedia based programming, and Applets. Students will create programming project(s) that demonstrates their mastery of Java programming principles and concepts.

2 lectures, 2 labs, 3 credits

Prerequisite(s): INF-153 or by permission of Academic Department Chair

**Textbooks and Supplies:**

See course outline

| Student Learning Objectives  | Assessment Measures  |
|--|----------------------|
| 1. Code, test, and execute Java programs that use appropriate data structures.             | Lab Activity         |
| 2. Write programs that read data from and write data to external data files and databases. | Lab Activity<br>Exam |
| 3. Incorporate multimedia in programs.   | Lab Activity<br>Exam |
| 4. Create applets and deploy them in web pages   | Lab Activity<br>Exam |

| College Competencies:  | Student Learning Objective: |
|--|-----------------------------|
| 1. Critical Thinking – Students will actively reflect on, reason about, and form independent judgments on a variety of ideas and information, and use these skills to guide their beliefs and actions.           | 1-4                         |
| 2. Quantitative Reasoning – Students will correctly apply and reason about mathematical and formal concepts and operations, and will correctly interpret and analyze numerical data.                             | 1-4                         |
| 3. Technological And Information Fluency – Students will demonstrate computer fluency, and will be able to retrieve, organize, analyze, and evaluate information using both technological and traditional means. | 1 - 4                       |

**Course Content:**

See course outline

**Assessment:**

An average of 60% from combined assessment measures is required to demonstrate proficiency in course material.

Exams 50%%

Lab Work 50%

- In-Class Labs and Programming Projects
- Out Of Class Labs and Assignments
- Final Course Comprehensive Project

**Bonus Points**

- Practice Labs
- Several unannounced quizzes (at instructor's discretion)
- Student Participation

**Quizzes:**

There will be several quizzes given at the beginning of random classes. The quiz material will be based upon the prior lectures and labs. At the end of the semester, the average quiz score will be used as bonus points towards your exam grade. A quiz cannot be made up if missed. A student entering class late, after a quiz has begun, will not be entitled to extra time to complete the quiz. Students entering class after a quiz is completed will not be permitted to take the quiz.

**Testing:**

Students **are required** to take exams on the day and time they are scheduled. If special circumstances require an exam schedule adjustment, this must be **worked out in advance** with the instructor. If a student misses an exam (except for prearranged circumstances with the instructor) a zero grade will be assigned.

The instructor can be reached by **telephone** (see above), **email** (preferred), or a **written note** can be left in the Divisional Office (during the day) A-306C or in the Evening Office L-113. If there are extreme circumstances (documentation may be required) that prevent a student from taking an exam according to the published schedule, the student should use one of the above options to contact the instructor before the next class. An arrangement for a special testing schedule is solely at the **discretion of the instructor**. A student who waits for the next class session to speak with the instructor will not be accommodated with a special exam or test schedule.

It is the student's responsibility to finish an exam correctly and completely and to submit it in form designated by the instructor whether it be in electronic and/or hard copy form.

***The use of electronic devices during exams is prohibited. Any student using an electronic device during an exam (unless directed to do so by the instructor) will receive a 0 for the exam.***

**Final Project:**

As part of this course, students will demonstrate their mastery of Java programming skills by developing a comprehensive programming project of their choosing. The topic of the projects can range from Business to Academic to Personal usage. The project scope and sequence must be comprehensive in nature and demonstrate the students skill in concepts and principles covered throughout the course including: Inheritance, File Input and Output, Graphical User Interfaces, and Multimedia. The project will be developed throughout the entire semester and will be presented to the class and instructor on the final course session. Throughout the course students will develop and build their comprehensive projects in five stages: (1). Initial Proposal (Analysis); (2). Project Plan (Design); (3). Coding Check 1 (Implementation); (4). Coding Check 2 (Implementation & Testing); and (5). Project Presentation. The Final Project will account for 15% of a student's course grade and is therefore an essential component of this course. The first four check-points will be evaluated as part of a students'

“Out Of Class Assignments/Projects” grade.

### Lab Projects:

Laboratory assignments involve hands-on procedures that show the instructor that the student can competently write effective programming solutions to various problems. It is important that the student **attend all lab sessions**. The student should read the scheduled assignment in the text **prior to coming to lab class**. The lab assignments are required for grading. They must be completed on the assignment due date. All lab assignments will be given and completed during the same lab session. Lab assignments cannot be done any time other than when they are scheduled. The student will not be permitted to pick up where he/she left off during the prior session when entering the next scheduled lab. A student's personal safety is a paramount consideration. When performing assigned lab work, all students are expected to **adhere to the safety guidelines and instructions** provided.

Throughout the course the instructor will assign a variety of practice problems and lab activities. These assignments are to be completed **by their assigned date** and submitted either in hard-copy or electronic format as described in the assignment / project. The free-lab at the college is available for students without computer access at home and is equipped with the necessary software and Internet access to complete assignments. All out of class labs and projects must be completed in a timely manner. Submissions that are made after the due date will be **subject to a deduction of 10 points per day late**. If a student is experiencing technical issues in completing or submitting assignments, the student is responsible to **notify the instructor as soon as possible** to make alternative arrangements for submission and to avoid being penalized for a late submission.

### Homework:

It is a **standing assignment** that the student read each chapter of the book prior to its discussion. Following the class discussion, the student should reread the material and work with the exercises throughout the text. It is anticipated that students will spend at least four hours per week reading the text and working with the exercises and supplemental resources.

### Policies:

- **Lateness** – The roll will be taken at the beginning of class. If the student is not in attendance at that time, he/she will be carried in the roll book as being absent unless the instructor is notified immediately after class. Attendance sheets cannot be adjusted at following class meetings.
- The student must adhere to all **college policies**. Due to the nature of this course, it is recommended that the student review the policy titled “*Acceptable Information Technology Use at Bergen Community College*”.
- The use of portable electronic devices such as pagers and cell phones is **not permitted** while class is in session. Please be sure to silence electronic devices before entering class.
- The use of audio CD or tape players, radios, and college computers to play music during class is prohibited.
- Cell phones are to be off during class.
- Students are expected to demonstrate listening, reading, note taking, and writing skills. The student will need to take notes during class discussions and understand and follow verbal and written directions. All assignments and correspondence with the instructor (including e-mail) must be well written in full sentence format. Proper paragraph format must be used for all postings to the student bulletin board (if applicable).
- The subject line of all e-mail correspondence to the instructor must contain the course number and section and student's name. Any e-mail received without this information will not be opened.
- **Plagiarism** in any form will be treated as a failure to complete an assignment. All work submitted should reflect individual effort by the student.
- In borderline cases that arise in almost every class each semester, a student's attendance, class participation, attitude, and observed effort will be considered in helping to determine the student's final grade.

If the instructor does not appear after 20 minutes following the scheduled starting time, students should generate an attendance list. One volunteer member needs to deliver the list, containing the course title, date, and instructor's name, to the Evening Office (L-113) or to the Divisional Office (during the day) A-306C.

**Additional policy and assessment information may be distributed by individual instructors.**