**SYLLABUS - COP 2251 - JAVA PROGRAMMING II**

**TERM 595 – FALL 2021 – SECTION #642**

**NOTE: This course is live-online on Thursday evenings, not face-to-face on campus.**

**INSTRUCTOR:**

Name: Brad Yourth

Email: yourth.brad@spcollege.edu

Office: ES 213D, Clearwater Campus

**Office Hours: Please see Instructor Course Page below**

Instructor Page : <https://web.spcollege.edu/instructors/id/yourth.brad>

**ACADEMIC DEPARTMENT:**

Department: College of Computer & Information Technology (CCIT)

Office Location: St Petersburg/Gibbs – TE116C

**COURSE INFORMATION:**

**Course Description**

Prerequisite: [COP 2250](http://www.spcollege.edu/popcourse/cop-2250). This course will teach students to write advanced Java programs. Topics include inheritance, abstract classes and interfaces, JavaFX basics, event-driven JavaFX Programming, JavaFX UI Controls and multimedia, generics, lists, stacks, queues, sets, maps, basic MySQL and Java Database Programming.

47 contact hours.

**LEARNING OUTCOMES**:

1. The student will demonstrate knowledge of inheritance and polymorphism in Java.
2. The student will demonstrate knowledge of abstract classes and interfaces.
3. The student will demonstrate knowledge of JavaFX basics.
4. The student will demonstrate knowledge of event-driven JavaFX programming and animation.
5. The student will demonstrate the use of JavaFX UI Controls and multimedia.
6. The student will demonstrate knowledge of generics in Java.
7. The student will demonstrate knowledge of classes and interfaces in the Java Collections Framework.
8. The student will demonstrate an understanding of sets and maps in Java programs.
9. The student will demonstrate an understanding of MySQL and JDBC programming in Java.

**LEARNING OUTCOMES AND OBJECTIVES**:

1. **The student will demonstrate knowledge of inheritance and polymorphism in Java by:**
2. Creating programs that code classes and subclasses.
3. Writing programs that demonstrate method overriding and dynamic binding.
4. Writing programs that use the instanceof operator and casting.
5. Writing programs that demonstrate class ArrayList and use its methods.
6. Demonstrating knowledge of class Object and its methods.
7. **The student will demonstrate knowledge of abstract classes and interfaces by:**
8. Writing programs that create abstract classes and extend them.
9. Writing programs that create implement interfaces.
10. Writing programs with classes that implement the Comparable interface.
11. Testing classes with Junit.
12. **The student will demonstrate knowledge of JavaFX basics by:**
13. Writing programs that create windows with nodes, shapes, and images.
14. Writing programs that organize and display content in layout panes.
15. Writing programs that feature UI controls, colors and fonts.
16. **The student will demonstrate knowledge of event-driven JavaFX programming and animation by:**
17. Creating JavaFX programs that code and register handlers for handling events.
18. Writing JavaFX programs that use lambda expressions to handle events.
19. Coding handler classes with inner classes and anonymous inner classes.
20. Coding JavaFX programs to handle Mouse events, Key events, and changes in observable objects.
21. **The student will demonstrate the use of JavaFX UI Controls and multimedia by:**
22. Writing JavaFX UI programs that use the Button, Label, CheckBox, RadioButton and TextField classes.
23. Writing JavaFX UI programs that use the TextArea, ComboBox, ListView, ScrollBar and Slider classes.
24. Writing JavaFX UI programs that feature audio and video content.
25. **The student will demonstrate knowledge of generics in Java by:**
26. Writing Java programs that define generic classes and interfaces.
27. Writing Java programs that define and use generic methods.
28. Writing Java programs that define and use generic raw types and wildcard generic types.
29. **The student will demonstrate knowledge of classes and interfaces in the Java Collections Framework by:**
30. Writing Java programs that use the common methods of the Collection interface.
31. Writing Java programs that use the static utility methods of the Collections class.
32. Writing Java programs that use the ArrayList, LinkedList, Vector, Stack and Queue classes.
33. **The student will demonstrate an understanding of sets and maps in Java programs by:**
34. Writing Java programs that store objects in instances of class HashSet, LinkedHashSet, and TreeSet.
35. Writing Java programs that store objects in instances of class HashMap, LinkedHashMap, and TreeMap.
36. **The student will demonstrate an understanding of MySQL and JDBC programming in Java by:**
37. Creating MySQL databases and tables and manipulating them with Structured Query Language (SQL).
38. Writing JDBC programs that perform queries, updates, inserts, and deletions on MySQL databases.
39. Creating JavaFX GUI programs for working with MySQL databases.
40. Writing JDBC programs that use prepared statements, stored procedures, and database metadata.

**REQUIRED TEXTBOOK:**

|  |  |
| --- | --- |
| **TITLE** | **IMAGE** |
| Introduction to Java Programming and Data Structures  Comprehensive Version  Edition: **12th**  Author: Y. Daniel Liang  Publisher: Pearson  ISBN: 978-0-13-652023-5 |  |

* The textbook is needed immediately.
* **NOTE:** **Older editions lack some Java that the course requires**.
* Be sure to read the chapters and try the zipped examples before tackling the Java assignments.

**IMPORTANT DATES:**

Course Dates: 10/11/2021

Drop/Add: 10/15/2021

Last day to withdraw with a “W” grade: November 12, 2021

**Course Closes at 9:00 pm on Thursday, December 9, 2021**

Other Dates: <http://www.spcollege.edu/academic-calendar/>

**COURSE OPERATIONS**

This is an intensive course in Java programming. If you have questions or problems, **use the Course Forum**. Be specific when describing the issue. You can even paste in some code (a few lines) that isn’t working for you. I will respond to Course Forum postings with tips and suggestions. You can do the same to help your classmates. Don’t fall behind. Get help right away to keep pace.

**Online Sections**  
In online sections, students will meet the course objectives by reading the course text book and supplemental resources, trying example programs, watching instructional screen-capture videos, and completing weekly Java coding assignments by specified due dates. Due dates can be seen in the Calendar. Students are advised to **set aside at least six weekly hours** for these tasks.

**Blended Sections**

In blended sections, students meet the course objectives by attending computer lab sessions on campus and by study at home. Your professor will manage learning activities during the computer lab sessions and provide instructions for home study duties. Home studies will include reading the course text book and supplemental resources, trying example programs, watching instructional screen-capture videos, and completing weekly Java coding assignments by specified due dates. Due dates can be seen in the Calendar, or by clicking Course Home. Students are advised to set aside at least five weekly hours for these tasks.

**Traditional (face-to-face) Sections**

In traditional, on-campus sections, students meet the course objectives by attending computer lab sessions, but also by study at home. Your professor will deliver lessons and manage learning activities during the computer lab sessions. Home studies will include reading the course text book and supplemental resources, trying example programs, watching instructional screen-capture videos, and completing weekly Java coding assignments by specified due dates. As in all traditional courses, home study is important for achieving the course objectives. Due dates can be seen in the Calendar.

**OUR LEARNING MANAGEMENT SYSTEM**

Use your student ID number and password to login and access the resources for COP 2250. This course presents a sequence of modules that students work through in order. Each module is based on the content in one or more text book chapters. Every module contains sub-tasks to be worked through in order, culminating in a Java coding assignment.

A typical module has the following subtasks:

* A document that summarizes skills and knowledge needed to meet the objectives.
* A zipped file that contains the text book sample programs.
* A PowerPoint slide show for reviewing the chapter.

Students are encouraged to explore additional learning activities, too. For example, when studying example programs in the text book and zipped examples, ideas for similar programs will often come to mind. Students are strongly urged to pursue these ideas and write their own original programs, and to share them with the class. There is no better way to learn. To become a proficient programmer, you must write computer programs. Lots of them!

**ATTENDANCE:**

Regular attendance is expected and will be taken at the start of every class in face-to-face and blended sections. In online sections, attendance will be based on progress as determined by the instructor. Attendance is crucial to keeping pace and eventual success.

**GRADING:**

This is a 100-point course, points being awarded according to the table below.

|  |  |  |
| --- | --- | --- |
| **Category** | **Details** | **Points** |
| Java Programming Assignments | 8 assignments @ 10 points  1 assignment @ 15 points 1 assignment @ 5 points | 80  15  5 |
|  | | 100 points |

There are **no quizzes and no final exam. 😊**

However, you will be very busy because **there are many chapters to cover.**

**SCHEDULE**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ASST | CHAPTER | TOPIC DESCRIPTION | POINTS | DUE |
| 1 | 11 | Inheritance & Polymorphism | 10 | Oct 21 |
| 2 | 13 | Abstract Classes, Interfaces | 10 | Oct 21 |
| 44**\*\*** | JUnit | 5 | Oct 28 |
| 3 | 14 | Java FX Basics | 10 | Nov 4 |
| 4 | 15 | Event-Driven Programming | 10 | Nov 11 |
| 5 | 16 | JavaFX GUIs | 10 | Nov 11 |
| 6 | 19 | Generics | 10 | Nov 18 |
| 7 | 20 | Lists, Stacks, Queues | 10 | Nov 25 |
| 8 | 21 | Sets and Maps | 10 | Dec 2 |
| 9 | 34 **\*\*** | Java and Databases | 15 | Dec 9 |
|  |  | Total | 100 |  |

**\*\*** Not in text but **available as a PDF file**.

This course uses a **points system** with all **ungraded** assessments having an **initial value of zero**. This means your **current final grade** will be **I** (**I**ncomplete) or **F** for several weeks. **Do not be alarmed**. As you complete graded assessments **your grade will gradually rise** through **D --> C --> B** and hopefully **A**. Just keep up with the graded assessments and you will succeed.

* Note that some assignments have the same due date.
* Assignments not initially earning full points may be resubmitted **ONCE** without penalty.
* Any redo **must be submitted** **not later than 1 week after the due date**.
* Assignments **will not be accepted** 1 week after the due date and will be assigned a zero score.
* Deadline for all assignments is **midnight** **on Wednesday, July 7** when the **course page will close**.

Grade Point Thresholds

|  |  |
| --- | --- |
| Grade A | 90 – 100 points |
| Grade B | 80– 89 points |
| Grade C | 70 – 79 points |
| Grade D | 60 – 69 points |
| Grade F | 0 – 59 points |

Note: A minimum grade of C is required for the A.S. Degree.

**ACADEMIC HONESTY:**

All students are expected to abide by the SPC Honor Code, viewable at

<http://www.spcollege.edu/AcademicHonesty/>

**CODE OF CONDUCT:**

In addition to the academic honesty policy, all students are expected to adhere to the code of conduct.

* I will not share solutions to assignments unless invited to do so as part of the assessment.
* I will not take part in any activity that dishonestly enhances my own results, or dishonestly affects the results of other learners.
* I will use proper spelling, punctuation, and grammar in all course communications.
* I may engage in robust debate where appropriate to the learning experience, but I will not deliberately personally attack or offend others.
* I will not use racist, sexist, homophobic, sexually explicit or abusive terms or images, or swear words or language that might be deemed offensive.
* I will not participate in, condone or encourage unlawful activity, including any breach of copyright, defamation, or contempt of court.

**COLLABORATION RULE:**

Some assignments might require students to collaborate with classmates to develop a program, but as a rule, submitted programs must be entirely the work of the submitting student. Please do not refer to course materials from previous terms.

In comments in the drop box for each programming assignment, list:

* All collaborators, including SPC tutors.
* All written sources that you consulted, other than the text and course handouts from this term.
* If you had no collaborators and consulted no written sources, then write, "I worked alone."

**Homework without a collaboration statement will not be graded**. If you somehow violate the collaboration policy, your best option is to tell us before we notice. Mistakes you confess are forgivable.

* **Programs that have been copied or shared will be assigned zero points, and the violation will be recorded in the Academic Integrity Database**.

**GETTING HELP WITH JAVA – STEPS TO TAKE**

1. There is a Course Forum where you can ask questions about Java (or anything else about this course). Your professor, or a classmate, will respond to help you.
2. You can email your instructor with a Java question.
3. You can seek out a tutor at a Learning Support Center. Look here: <http://www.spcollege.edu/tutoring/>
4. Excellent Java tutoring is available in the Clearwater LSC. Call for schedules.
5. Your professor may also be available during office hours. Refer to your professor’s instructor page. Make an appointment and indicate the topic or part of the course for which you seek help.

**Above all, take action immediately to avoid falling behind! Do not procrastinate!**

At the 60% point of the course, students who are far behind (3 assignments) might be dropped.

**GETTING TECHNICAL ASSISTANCE**

**Call 727-341-HELP (727-341-4357)**

Attendants are available at the number above from 7:00am to 12:00am (Midnight), 7 days a week, to assist you with technical issues related to MySPC, D2L, Student Email, and other technology related problems. You can also find help at <http://www.spcollege.edu/helpdesk/>

**SYLLABUS ACCEPTANCE POSTING:**

Students must make a posting to inform the instructor that they have read, understand, and will abide by the rules of the syllabus and all college policies.

**STUDENT SURVEY OF INSTRUCTION** (SSI):

The student survey of instruction is administered in courses each semester and is designed to improve the quality of instruction at St. Petersburg College. All student responses are confidential and anonymous and will be used solely for performance improvement. The SSI will show up near the end of the course. Please complete the SSI so we can improve our offerings.

Best wishes for an enjoyable, productive course!

Brad Yourth

**SYLLABUS ADDENDUM**

**In the event that topics listed in this addendum also appear in your syllabus, please note that you should rely on the addendum information as this information is the most current.**

**Emergency Preparedness**

*In the event that a hurricane or other disaster causes closure of St. Petersburg College facilities, you may be provided the opportunity to complete your course work online. Following the event, please visit the college web site for an announcement of the College’s plan to resume operations~~.~~*

*This syllabus is currently available in online for your convenience.*

*Log in to confirm that you have access, reporting any difficulty to the SPC Student Technical Support Center at 727 341-4357 or via email at* [*Onlinehelp@spcollege.edu*](mailto:Onlinehelp@spcollege.edu)*.*

**IMPORTANT COLLEGE POLICY REGARDING COURSE DROP/ ADD PERIOD AND AUDIT INFORMATION**

Students **CANNOT** add a course following the 1st day the class meets prior to the second class meeting. Students **CAN** drop a course through Friday of the first week of classes and be eligible for a refund. Except by appeal to an associate provost, students may not change from credit to audit status after the end of the first week of classes. Online classes may be added through the standard drop/add period for that course.

**GRADING AND REPEAT COURSE POLICIES**

State policy specifies that students may not repeat courses for which a grade of “C” or higher has been earned except by appeal to an associate provost. Students may repeat a course one time without penalty. On the third attempt, students will pay the full cost of instruction. In addition to any required lab or special fees, the full cost of instruction rate for 2011-2012 is $352.29 per credit hour. In addition, on the third attempt students may NOT receive a grade of “I,” “W,” or “X,” but must receive the letter grade earned. The grade on the final last attempt with the exception of a “W” grade will be the grade that will be calculated into the overall grade point average. (Developmental courses do not average into the grade point average).

**ATTENDANCE/ACTIVE PARTICIPATION/WITHDRAWAL POLICIES**

Faculty will publish their own participation/attendance policies in their syllabi. Instructors will verify that students are in attendance during the first two weeks of class. Students classified as “No Show” for both of the first two weeks will be administratively withdrawn from any class which they are not attending. The student’s financial aid will be adjusted based on their updated enrollment status. If a student is administratively withdrawn from a class because they were a “No-Show” during the first two weeks of class, financial aid will not pay for the class and the student will be responsible for paying for that class.   
  
Students who are not actively participating in class as defined in an instructor's syllabus will be reported to the Administration during the week following the last date to withdraw with a “W” (as posted in the academic calendar on the college’s web site). **A grade of “WF” will be assigned to students who are not actively participating during the week following the last day to withdraw with a W grade**.  
  
Students will be able to withdraw themselves at any time during the term. However, **requests submitted after the last date to withdraw with a “W” (see academic calendar) will result in a “WF.”** Students and instructors will automatically receive an email notification through their SPC email address whenever a withdrawal occurs.   
  
**Withdrawing after the “Last Date to Withdraw with a Grade of ‘W’” can have serious consequences**. If the student withdraws from a class after the deadline posted in the academic calendar, the student will receive a final grade of ‘WF,' which has the same impact on the student's GPA as a final grade of “F.” A “WF” grade also could impact the student's financial aid, requiring repayment of financial assistance. Students should consult with an academic advisor or financial assistance counselor prior to withdrawing from a class.

**FEDERAL GUIDELINES RELATED TO FINANCIAL AID AND TOTAL WITHDRAWAL FROM THE COLLEGE**

The U.S. Department of Education requires students who completely withdraw prior to the 60% point of the term and who receive Federal financial aid i.e., Federal Pell Grant, Federal Academic Competitiveness Grant (ACG), Federal Stafford Loan, and/or Federal Supplemental Educational Opportunity Grant SEOG--to repay a portion of their financial aid.   
  
**Students considering a withdrawal from all classes before the published withdrawal date** should consult a financial assistance counselor to understand their options and the consequences of the total withdrawal. For further information regarding this policy and other financial assistance policies we encourage you to visit our website at: [**www.spcollege.edu/getfunds**](http://www.spcollege.edu/getfunds)

**COLLEGE LEVEL ACADEMIC SKILLS (CLAS) GRADUATION REQUIREMENTS**   
[College Level Academic Skills](http://www.spcollege.edu/clas/)

**DUAL ENROLLMENT, EARLY ADMISSIONS, & EARLY COLLEGE STUDENTS**

A Dual Enrollment, Early Admissions, or Early College student may not withdraw from any college course without permission from the Early College/Dual Enrollment office. Withdrawal from a course may jeopardize the student's graduation from high school. The Dual Enrollment office can be reached at 727 712-5281 (TS), 727 791-5970 (CL) or 727 394-6000 (SE). [**www.spcollege.edu/central/de/index.htm**](http://www.spcollege.edu/central/de/index.htm)

**ACADEMIC HONESTY**

It is your responsibility to be familiar with St. Petersburg College’s Academic Honesty policies and the consequences of violations. **There is no tolerance for any form of academic dishonesty**. Discipline can range from a zero on a specific assignment to expulsion from the class with a grade of “F” and the possibility of expulsion from the college. Note that copying/pasting published information without citing your sources, whether the information is from your textbook or the Internet is plagiarism and violates this policy. Even if you slightly change the words from an outside source, the ideas are someone else's so you still have to cite your sources. Cheating, plagiarism, bribery, misrepresentation, conspiracy, and fabrication are defined in Board Rule 6Hx23-4.461.   
Student Affairs: Academic Honesty Guidelines, Classroom Behavior. [**www.spcollege.edu/webcentral/catalog/current/stu\_affairs\_honesty.htm**](http://www.spcollege.edu/webcentral/catalog/current/stu_affairs_honesty.htm)   
  
Copyrighted material within this course, or posted on this course website, is used in compliance with United States Copyright Law. Under that law you may use the material for educational purposes related to the learning outcomes of this course. You may not further download, copy, alter, or distribute the material unless in accordance with copyright law or with permission of the copyright holder. For more information on copyright visit <http://www.copyright.gov>.

**STUDENT EXPECTATIONS**

All electronic devices including computers, cell phones, beepers, pagers, and related devices are to be silenced and/or turned off unless they are required for academic purposes. Any use of these devices (including texting) for non-academic purposes is a violation of College Policy and subject to disciplinary action.   
  
Students may be required to have discussions of class assignments and share papers and other class materials with instructors and classmates via chat rooms and other mechanisms. Due to the potential piracy of students’ materials, the College is not responsible for student work posted on the Internet outside of the college’s Learning Management System.  
  
Each student's behavior in the classroom or online is expected to contribute to a positive learning/teaching environment, respecting the rights of others and their opportunity to learn. No student has the right to interfere with the teaching/learning process, including the posting of inappropriate materials on chatroom or Web page sites.  
  
The instructor has the authority to ask a disruptive student to leave a classroom or lab. The instructor may also delete posts or materials from an online or blended class and/or take disciplinary action if disruptive behavior continues.   
  
**ONLINE STUDENT PARTICIPATION AND CONDUCT GUIDELINES**

The practices of courtesy and respect that apply in the on-campus classroom also apply online. Any discriminatory, derogatory, or inappropriate comments are unacceptable and subject to the same disciplinary action applied in courses offered on campus.

**EMERGENCY PREPAREDNESS**

The college website at [**www.spcollege.edu**](http://www.spcollege.edu) is the official source of college information regarding the status of the institution. Other important information will be communicated via SPC Alert, local media outlets, and the college toll free number 866-822-3978. All decisions concerning the discontinuation of college functions, cancellation of classes, or cessation of operations rest with the President or his/her designee.  
  
In the event that a hurricane or other natural disaster causes significant damage to St. Petersburg College facilities, you may be provided the opportunity to complete your course work online. Following the event, please visit the college Web site for an announcement of the College's plan to resume operations.   
  
Students should familiarize themselves with the emergency procedures and evacuation routes located in the buildings they use frequently.   
  
Located in each classroom is an Emergency Response Guide (flip-chart) that contains information for proper actions in response to emergencies. Students should be prepared to assess situations quickly and use good judgment in determining a course of action. Students should evacuate to assembly areas in an orderly manner when an alarm sounds or when directed to do so by college faculty or staff or emergency services personnel. Students may access additional emergency information by going to [**www.spcollege.edu/security**](http://www.spcollege.edu/security) . In face to face courses your instructor will review the specific campus plans for emergency events.   
  
**CAMPUS SAFETY AND SECURITY**

For information on campus safety and security policies please contact **727-791-2560**. If there are questions or concerns regarding personal safety, please contact the Provost, Associate Provost, Campus Security Officer, or Site Administrator on your campus. [**www.spcollege.edu/tsc/security.htm**](http://www.spcollege.edu/tsc/security.htm)

**SEXUAL PREDATOR INFORMATION**

Federal and State law requires a person designated as a “sexual predator or offender” to register with the Florida Department of Law Enforcement (FDLE). The FDLE is then required to notify the local law enforcement agency where the registrant resides, attends, or is employed by an institution of higher learning. Information regarding sexual predators or offenders attending or employed by an institution of higher learning may be obtained from the local law enforcement agency with jurisdiction for the particular campus by calling the FDLE hotline (1-888-FL-PREDATOR) or (1-888-357-7332), or by visiting the FDLE website at [**http://offender.fdle.state.fl.us/offender/homepage.do**](http://offender.fdle.state.fl.us/offender/homepage.do)   
  
**DISABILITY RESOURCES**  
Disability Resources at SPC wants to help you succeed. If you have a documented disability or think that you may have learning or other disability and would like to request accommodations, please make an appointment with the Learning Specialist on your campus. If you will need assistance during an emergency classroom evacuation, please contact your campus learning specialist immediately about arrangements for your safety. Disability Resources staff can be reached at 791-2628 or 791-2710 (CL and EPI), 341-4316 (SP/G), 394-6289 (SE), 712-5789 (TS), 341-3721 (HEC), 341-4532 (AC), or 341-7965 (DT). If you would like more information, you can learn more about Disability Resources on our website: [**www.spcollege.edu/central/ossd**](http://www.spcollege.edu/central/ossd)

**COLLEGE CALENDAR**

[**www.spcollege.edu/calendar/**](http://www.spcollege.edu/calendar/)

**M.M. BENNETT LIBRARIES**

[**www.spcollege.edu/central/libonline/**](http://www.spcollege.edu/central/libonline/)

**CAREER DEVELOPMENT SERVICES**

[**www.spcollege.edu/Central/Career/OCDS/index.shtm**](http://www.spcollege.edu/Central/Career/OCDS/index.shtm)

INTERNATIONAL STUDENT SERVICES  
[**www.spcollege.edu/central/international/**](http://www.spcollege.edu/central/international/)

**LEARNING SUPPORT COMMONS (Tutorial Services)**

[**www.spcollege.edu/tutoring/**](http://www.spcollege.edu/tutoring/)

**SPC VETERAN AFFAIRS**

[**www.spcollege.edu/veterans/**](http://www.spcollege.edu/veterans/)