

**COMPUTER PROGRAMMING 1, 2, ADVANCED COMPUTER PROGRAMMING
(NEW NAMES: INTRODUCTION TO COMPUTER PROGRAMMING,
INTERMEDIATE COMPUTER PROGRAMMING, ADVANCED COMPUTER
PROGRAMMING 2022-23)**

COURSE CODE: 5050, 5051, 5376

Additional Materials and Resources

[Instructional Materials](#)

Certifications:

- [C++ INSTITUTE](#)
 - [C++ Certified Associate Programmer \(CPA\)](#)
 - [C++ Certified Professional Programmer \(CPP\)](#)
 - [C Programming Language Certified Associate \(CLA\)](#)
 - [C Certified Professional Programmer \(CLP\)](#)

- [PYTHON INSTITUTE](#)
 - [PCEP – Certified Entry-Level Python Programmer](#)
 - [PCAP – Certified Associate in Python Programming](#)
 - [PCPP – Certified Professional in Python Programming 1](#)
 - [PCPP – Certified Professional in Python Programming](#)

- [ORACLE](#)
 - [Java EE 7 Application Developer | 1Z0-900](#)
 - [Oracle Certified Professional: Java SE 11 Developer \(Upgrade from OCP Java 6, 7 & 8\)](#)
 - [Oracle Certified Associate, Java SE 8 Programmer](#)
 - [Oracle Certified Professional, Java SE 8 Programmer](#)
 - [Oracle Certified Foundations Associate, Java](#)
 - [Oracle Certified Professional: Java SE 11 Developer](#)

Student Organizations:

[DECA](#)

[FBLA](#)

[SkillsUSA](#)

[TSA](#)

Teacher Resources:

[SC 9-12 Computer Science Standards](#)

[CSTA Standards](#)

[Code.org](#)

[CodeHS](#) – coding platform

Designing, Testing, and Debugging Programs:

<https://www.getzephyr.com/insights/test-scripts-test-cases-test-scenarios>

<https://www.softwaretestinghelp.com/difference-between-test-plan-test-strategy-test-case-test-script-test-scenario-and-test-condition/>

<https://www.geeksforgeeks.org/difference-between-test-case-and-test-script/>

Visual Studio or similar program that provides students the ability to write code and test its operation.

Program Documentation:

Google Docs

MS Word

//Comments

Program Design:

[Lucidchart used to make flowcharts](#)

[Creatively used to make flowcharts](#)

[Web Sequence](#)

Programming:

<https://codingbat.com> Java and Python

<http://www.drjava.org> (IDE)

<https://codecombat.com>

<https://education.minecraft.net> (Python)

<https://www.khanacademy.org/computing/computer-programming>

<https://www.codehs.com>

<https://stackoverflow.com>

<https://github.com>

<https://repl.it/>

Project Management

[Fundamentals of Project Management Course Standards](#)

[Additional Materials/Resources](#)

Project Management Process

1. Initiation
 - a. Define Project Goals

- b. Create a Business Case
 - c. Complete Project Charter
 - d. Develop Stakeholder List
2. Planning
- a. Define Scope
 - b. Create a Project Plan
 - c. Set a Budget Baseline
 - d. Define Roles & Responsibilities
3. Execution
- a. Allocate Project Resources
 - b. Manage Project Resources
 - c. Build the Product/Process
 - d. Meet, Fix and Revise Issues Periodically
4. Monitoring & Control
- a. Track Effort & Cost
 - b. Monitor Project Progress
 - c. Ensure Adherence to Plan
 - d. Prevent Disruptions
5. Completion
- a. Distribute Deliverables
 - b. Review Deliverables
 - c. Get Approval
 - d. Document Learnings

Pseudocode and Algorithm Design:

<https://www.geeksforgeeks.org/how-to-write-a-pseudo-code/>
<https://www.wikihow.com/Write-Pseudocode>