** Course Syllabus**

**Introduction to Programming – CMP4201**

 **Spring 2023**

**Instructor:** Ms. Susie Cunningham

**Email:** scunningham@bsu.edu

 **Office: Elliott 008-C**

 **Classrooms: BU215 & BU219**

**Office Hours:**

**Mondays: Noon – 1:50 p.m. (in Elliott 008-C)**

 **5:00 – 5:30 p.m. (in BU219)**

**Tuesdays: Noon – 1:00 p.m. (in Elliott 008-C)**

 **3:00 – 4:30 p.m. (in Elliott 008-C)**

**Wednesdays: Noon – 1:50 p.m. (in Elliott 008-C)**

 **5:00 – 5:30 p.m. (in BU219)**

**Fridays: Noon – 1:50 p.m. (in Elliott 008-C) 5:00 – 5:30 p.m. (in BU219)**

**Other times for offices hours may be made by appointment. Also, can email me at scunningham@bsu.edu.**

**Description:**

This course is an **introduction to computer programming**. This course is designed for students with **little or no previous programming experience**. Students will learn to program using a top-down design, structured, and object-oriented approach. Topics will include using basic variables, loops, if/else statements, strings, arrays, functions, basic input/output files, pointers, structures, and objects. Students will program their own header files.

**Text:**

Gaddis, Tony. "C++ from Control Structures through Objects." Pearson, 2017.

**Course Methodology:**

Course methodology will include **hands-on activities, lectures, outside readings, classroom discussion, and programming projects.**

**Student Evaluation:**

There will be **2 tests**, **11 homework assignments/group programming projects,** and **a major final project.**

**For more practice: Students will be completing SoloLearn Modules**

Students receiving SoloLearn Certificate for C++ will receive +10 extra credit points.

**Method of Grading:**

Grades will be based on a point system.

 **Points**

 Tests 1 – 2 200

 Final Project 100

 Homework Assignments 105

 **Total Points 405**

 Students receiving SoloLearn Certificate for C++ at the end of the semester will receive +10 extra credit points.

 Accumulated totals are then distributed into letter grades as follows:

 **A (93% - 100%)**

 **A- (90% - 92.9%)**

 **B+ (87% - 89.9%)**

 **B (84% - 86.9%)**

 **B- (80% - 83.9%)**

 **C+ (77% - 79.9%)**

 **C (73% - 76.9%)**

 **C- (70% - 72.9%)**

 **D\* (69% and below)**

**Classroom Policies:**

**Homework Assignments:** **Homework assignments** must be **turned in by the due date**. Assignments may be turned in earlier than the due date. **Any late homework** will **result** in a **reduced** **grade.** **(25% off for each day late.) Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday all count as days. A timeframe for a day constitutes from 12:01 a.m. – Midnight.**

**Absence prior to due Date:** Missing class (excused or not) prior to a test, or other due dates for homework assignments does not exempt the student from preparing and taking the test and/or submitting the required homework assignment on the due date. Exceptions may be granted in advance of class time and must be discussed with the instructor.

**Tardiness:** Students arriving more than 5 minutes late to class are marked tardy. Students arriving 20+ minutes late will be marked absent. **A student sleeping in class will be counted as an absence.**

**Academic Dishonesty:** (Refer to the Indiana Academy Handbook.)

In the event, a student turns in a computer program for a homework assignment or test that was not

originally written by the student, the homework or test will fall under the category of plagiarism. This will be considered a **serious offense**. Students will be allowed to ask for help from other students if they are

working on a preannounce group project or the student needs assistance finding a syntax error or minor errors.

If a student does use code in a programming homework assignment or project that was obtained from the Internet, another programming source, or writing code that is similar in nature, the student **must put in a comment in the computer program with the source of where the code was obtained, otherwise this will be considered under the category of plagiarism.**

Furthermore, if a student writes a computer program for another student, the student “knowingly permitting one’s work to be submitted by another person as if it were the submitter’s original work” will also be penalized.

Penalties will be assessed in accordance to the Indiana Academy Handbook.

**Communication:**

The best way to communicate with me is through email at **scunningham@bsu.edu**. My phone dings when I receive an email and I can answer back via email through my phone. Generally, I do answer back almost immediately during work hours (unless I am teaching a course or on my way to class). I will always respond back within 24 hours. (This does include the weekends.) Generally, I am more available late at night. Office hours will be posted

**Diversity and Inclusion:**

Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse as expressed in our Beneficence Pledge and through university resources found at <http://cms.bsu.edu/campuslife/multiculturalcenter>.

**Accommodations:**

If you need course adaptations or accommodations because of a disability, please contact me as soon as possible.  Ball State’s Disability Services office coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or dsd@bsu.edu.

**Canvas Accessibility:**

Canvas provides a user experience that is easy, simple, and intuitive. Special attention has been paid to making Canvas screen-readable. The Rich Content Editor encourages users to create accessible content pages (i.e. text formatting is accomplished using styles). Canvas is designed to allow limited customization of colors and schemes to be accessible for all users. The National Federation of the Blind granted Canvas the Gold Level Web Certification in 2010.

Find more information by visiting the [Canvas Voluntary Product Accessibility Template (VPAT)](https://www.canvaslms.com/accessibility). <https://community.canvaslms.com/t5/Accessibility/Accessibility-within-Canvas/ba-p/261501>

**Indiana Academy Mask Policy:**

The Indiana Academy will follow [Ball State University’s mask policy](https://www.bsu.edu/-/media/www/departmentalcontent/emergencypreparedness/covid19/recovery%20plans/student%20return%20to%20campus%20plan_11-16-2020_full.pdf?la=en&hash=C46E28697410544B454D667609AA24BE6C7BAA9F) (see Section IV).

## Class Participation: Unless instructed otherwise, students need to be working on items relating to the classroom homework/topic during the class time.

**Indiana Academy Unexcused Absence Policy**

It is the policy of the Indiana Academy that any absence from class is unexcused, except for illness, death in the family, college or school-related activities, and extenuating circumstances. When a student is absent from a class, the instructor reports the student absence to the Faculty Attendance Coordinator in the Office of Academic Affairs. Unless the absence is excused by a school official, it is considered unexcused. The decision as to whether an absence is excused is not determined by the instructor.

The student is expected to attend every class. The student is allowed one unexcused absence without penalty. Each additional unexcused absence will be penalized as follows: Unexcused absence (1) = 1-point subtraction from final grade. Unexcused absence (2) = 3-point subtraction from final grade. Unexcused absence (3) = 5-point subtraction from final grade. (For example, if you have an 89 final average with (3) unexcused absences your final grade will be 84). Four (4) or more unexcused absences will lead to academic and residential consequences beyond the scope of this class determined by the Office of Academic Affairs (i.e., residential groundings, parent/principal conference, and/or detention).

Any minor assignment/test/project/presentation missed due to an unexcused absence will be handled according to the late work policy of this class. A student will be given an opportunity to retake any missed assignment/test/project/presentation worth more than 20% of the final grade but will be docked a full letter grade as a result.

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**Tentative Class Activity and Assignments**

**C++ Programming – CMP4201**

**Week of January 2, 2023:**

Students will learn about basics of computer programming.

An introduction to information-based systems and the history of computers will be presented.

**Week of January 9, 2023:**

Students will begin to work with data on a binary level and will convert data to an ASCII and EBCDIC format.

**HW #1** (10 pts.) will be due on January 11, 2023 by 11:59 p.m. (Binary Homework)

**Reading Homework Assignment:** Chapter #1

Students will learn how to use variables, constants, use math operations and how to accept input from a keyboard.

Students will begin programming basic commands.

**HW #2** (5 pts.) will be due on January 13, 2023 by 11:59 p.m. (ASCII Art Homework)

**Reading Homework Assignment:** Chapters #2 & #3

**SoloLearn Modules:** Basics

**Week of January 16, 2023:**

Monday – Martin Luther King, Jr. Day (No class.)

Students will be introduced to if/else statements and logical operators.

**HW #3** (5 pts.) will be due January 20, 2023 by 11:59 p.m. (MadLib homework)

**Reading Homework Assignment:** Chapter #4

**SoloLearn Modules:** Conditionals

**Week of January 23, 2023:**

Students will be introduced to switch statements and loops.

**HW #4** (10 pts.) will be due on January 27, 2023 by 11:59 p.m. (Guessing Game Homework)

**Reading Homework Assignment:** Chapter #5

**SoloLearn Modules:** Loops

**Week of January 30, 2023:**

Students will be introduced to writing and reading from a file.

Students will be introduced to how information is stored on a hard drive and in memory. Pointers will be used to demonstrate this concept.

**HW #5** (10 pts.) will due on February 1, 2023 by 11:59 p.m. (Transportation Homework)

**Reading Homework Assignment:** Chapter #12

**Week of February 6, 2023:**

Extended break – No classes on Monday

February 8th - Will review class material.

**Test #1** (Multiple choice and short answer/100 pts.) – February 10, 2023.

**Weeks of February 13 and February 20, 2023:**

Students will be introduced to the concept of functions. Students will learn how to use functions with

passing parameters by value, by reference, by arrays, using a return statement, and global variables.

**HW #7** (10 pts.) will be due on February 17, 2023. (Dice program using functions.)

**HW #8** (10 pts.) will be due on February 24, 2023. (RPG program using functions.)

**Reading Homework Assignment:** Chapter #6 & #9

**SoloLearn Modules:** Functions

**Week of February 27, 2023:**

Students will be introduced to working with and manipulating strings.

**HW #9** (10 pts.) will be due on March 1, 2023 by 11:59 p.m. (PigLatin Homework)

**Reading Homework Assignment:** Chapter #10

**SoloLearn Modules:** Data Types, Arrays, and Pointers (up to Lesson 30)

**Week of March 6, 2023:**

**SPRING BREAK!**

**Week of March 13, 2023:**

Students will be introduced to OOP (Object Oriented Programming)

Students will write and use their own header files.

**HW #10** (10 pts.) will be due on March 15, 2023 by 11:59 p.m. (Pet homework assignment)

**Reading Homework Assignment:** Chapter #13

**SoloLearn Modules:** Classes and More on Classes

**Week of March 20, 2023:**

Students will learn about arrays and multi-dimensional arrays.

**HW #11** (10 pts.) will be due on March 24, 2023 by 11:59 p.m. (Maneuver around 2-dimensional homework assignment)

**Reading Homework Assignment:** Chapter #7

**SoloLearn Modules:** Data Types, Arrays, Pointers (Lesson 30+)

**Week of March 27, 2023:**

Will review the class material.

**Test #2** (Multiple choice and short answer/100 pts.) – March 29, 2023

Students will begin work on their final programming projects.

**Weeks of April 3th, April 10th, April 17th, April 24th 2023:**

Students will work on final programming projects.

**SoloLearn Modules:** Finish the rest of the modules. Turn in SoloLearn Certificate for C++. Earn +10 extra credit points. April 29, 2023

**Week of May 1, 2023:**

**Final Programming project for class will be presented starting on the week of May 1, 2023.**

**(100 pts.)**

**All projects are due by May 1, 2023!! (by 11:59 p.m.)**