**Name:**

**Advanced Programming in C++**

**Lab Exercise 1/23/2025**

In this exercise, you are to write programs to solve the following problems. Submit your documented source code and attach it to this handout. **As part of your documentation in your source code, include a sample output**.

1. The Acme Widget Company in Taos, New Mexico wants so ship its widgets. The widget shipping box can hold 4 widgets. Write a program that allows the user to enter the number of widgets to be shipped and outputs the number of boxes required. For example, if 17 widgets are to be shipped, the number of boxes required is 5 with the last box having 1 widget.
2. Write a program that allows the user to enter a basketball player’s height in inches. The program should then output the players’ height in feet and inches. For example, if 73 inches is entered, it should report 6 feet 1 inch as the height.
3. Write a program that allows the user to enter a basketball player’s height in feet and inches. The program should then output the players’ height in inches. For example, if 6 feet 1 inch is entered, it should report 73 inches as the height.
4. Write a program that allows the user to enter a latitude and longitude in degrees, minutes, and seconds. The program should then convert and output the latitude and longitude as a floating point value. For example, 37° 48′ 23" will convert to 37.8064°. Hint: There are 60 minutes per degree and 60 seconds per minute.