

# EECE.2160: ECE Application Programming

## Key Questions

### Lecture 14 (Program 4 overview, for loops)

#### **QUESTIONS:**

1. Describe the characteristics of Program 4.
2. In what cases are `for` loops useful? Describe the basic structure of a `for` loop.
3. Describe the operators that allow you to directly modify a variable without writing a full assignment statement.
4. Explain the difference between pre- and post-increment or decrement operators.

#### **EXAMPLES:**

1. What does the following program print?

```
int n = 5;
printf("n = %d\n", ++n);
printf("Now, n = %d\n", n++);
printf("Finally, n = %d\n", n);
```

2. **Example:** What does each of the following print?

a. `for (i = 5; i < 40; i += 8)`  
    {  
        printf("%d ", i);  
    }

b. `for (i = -5; i < -10; i--)`  
    {  
        printf("%d ", i);  
    }

c. `for (i = 10; i <= 100; i = i+10)`  
    {  
        if (i % 20)  
            printf("%d ", i);  
    }

d. `for (i = 5; i < 10; i += i%2)`  
    {  
        printf("%d ", i++);  
    }