

# **EECE.2160: ECE Application Programming**

Spring 2016

## Lecture 4: Key Questions

January 27, 2016

1. What are the basic binary arithmetic operators supported by C?
2. Explain the modulus operator (%).
3. What determines the type of a binary operation's result?
4. What is the difference between division of integers and floating-point types?

5. Explain the operation of the unary negation operator (e.g., `-x`).
  
6. **Example:** Evaluate each of the following expressions, including the type (`int` or `double`) in your answer.
  - a. `19/3`
  
  - b. `3/19`
  
  - c. `19%3`
  
  - d. `3%19`
  
  - e. `5 + 7/2`
  
  - f. `5.0 + 7/2`
  
  - g. `5 + 7.0/2`
  
  - h. `5 * 3 % 3 / 6 + 14 + 10 / 2`
  
  - i. `5 * (3 % 3) / 6 + 14.0 + 10/3`

7. Describe the use of `printf()` to print numeric values and characters.

8. **Example:** Show the output of each of the following short programs:

a.

```
#include <stdio.h>
void main()
{
    int i=2, j=3, k, m;
    k = j * i;
    m = i + j;
    printf("%d %d %d %d\n", i, j, k, m);
}
```

b.

```
#include <stdio.h>
void main() {
    double f, g;
    f = 1.0 / 4.0;
    g = f * 20;
    printf("f = %lf,\ng = %.2lf\n", f, g);
}
```

c.

```
#include <stdio.h>
void main() {
    int a = 5, b = 2;
    printf("Output doesn't make sense", a, b, a + b);
}
```