High-Level Languages Provide Operators and Libraries

High-level languages also provide
◦ **a set of operators**
  ◦ that is not (too) dependent on the ISA
  ◦ so you do not need to write
    right shift, OR, XOR, and so forth.
◦ **standard libraries** for
  ◦ I/O,
  ◦ math,
  ◦ graphics,
  ◦ threads,
  ◦ and many other things.

How to Learn C Programming in ECE220

In lecture, you will **learn from examples**.

Exact rules of syntax are left to you.

To be good at programming,
you need practice
◦ **reading code** (examples in lecture / online),
◦ **writing code** (MPs), and
◦ **testing code** (MPs, one focused on testing)

Ask lots of questions!

Learn to Program by Reading Code

You can learn a lot by reading code

◦ How to **express types of problems**.

◦ How to **properly use application programming interfaces** (APIs) for networking, mathematics, graphics, sound, animation, user interfaces, and so forth.

◦ How to **make code easy to read** (style).

It's Often Necessary to Read Code to Understand It

We try to make you write plenty of comments.

When we give you code for class assignments, it will be well-commented (DISCLAIMER: THIS IS NOT A WARRANTY!)

In the real world…
◦ You will be lucky to find comments.
◦ You will be really lucky to find comments in a language that you understand.