

SPU27x Recommended Laboratory Equipment and Food List

Here we list most of the foods and other equipment that will be used in the labs. Please note that this equipment list is only recommended; you can complete the class without it. If you don't have access to the equipment, then you can find other ways to illustrate the scientific concept we are aiming for with the labs. As examples:

1. The first week of the course asks you to weigh a cup of flour. This is simple with a balance. However if you do not have a balance, we are providing instructions of how to build one. You are also free to invent another way to make the measurement—please then share it with us on the discussion forum. We would like to learn from you!
2. Sometimes the recipes we recommend will have ingredients that are not easily obtainable in your region. If this happens, please make another recipe that illustrates the scientific theme. And then, please share it with all of us.
3. If you can't think of a substitute, then just ask on the discussion forum—and we [or other students in the class] will help you find one.

Food Requirements:

- Eggs
- Milk, Heavy Cream
- Sugar
- Flour
- Clean water
- Ice
- Salt
- Soy Sauce (or water with food coloring)
- Chocolate (dark recommended)
- Butter (can substitute oil)
- Oil

Equipment Requirements:

- Thermometer (ideal range is standard meat probe range, somewhere from -20 to 220 degrees F)

- Scale (1g resolution or better) – instructions will be provided for home construction of a basic scale for students who are unable to buy or order a commercial scale
- Measuring cups: metric preferred.
- 2 medium or large pots, one with a lid
- At least one small bowl
- At least one medium or large bowl
- 2 large plastic bags (Ziploc or similar recommended)
- 2 small plastic bags (Ziploc or similar recommended)
- 1 lightweight, flat-bottomed dish, tray, container, or similar
- 1 ruler
- 1 fork or whisk
- 1 towel
- 6 mugs or ramekins or 1 roll of aluminum foil
- A heatsafe, flat-bottomed dish (pyrex, metal, ceramic, etc.)
- 1 cutting board
- 1 knife
- 1 oven mitt or tongs
- Disposable cups (plastic or paper, clear recommended)
- Straws or skewers

EQUIPMENT LIST BY LAB

Lab 1:

- Measuring cup, 1 cup volume or equivalent
- 1 pot (any size)
- Thermometer
- Scale (commercial is highly recommended, but instructions on making your own will be provided)

Lab 2:

- At least 2 pots, medium-to-large (or one pot plus one kettle)
- Thermometer
- Serving dish(es)

Lab 3:

- Thermometer
- At least one serving bowl
- Measuring cup (1 cup should work)

- 2 Large and 2 small plastic bags (Ziploc or similar recommended)
- Cups for measuring/weighing
- Spoons

Lab 4:

- A flat-bottomed, rigid plate or container (e.g. empty tofu container or meat tray, lightweight cutting board, etc.)
- Ruler
- Something of known weight

Lab 5:

- 1 pot
- 1 ruler
- A flat container or plate

Lab 6:

- 1 pot and metal bowl OR 1 microwave-safe bowl
- 1 medium bowl
- 1 small bowl
- 1 scale
- 1 fork or whisk
- 1 lidded pot
- 1 towel
- 6 mugs/ramekins OR aluminum foil
- 1 cutting board
- 1 knife
- 1 ruler
- 1 oven mitt or tongs

-1 thermometer

Lab 7:

-Plastic or paper cups (disposable, at least 2)

-Plastic straw or some type of skewer

-1 pot or heat-safe dish

Lab 8:

-Fork or whisk

-1 scale

-Bowl (or mortar/pestle)

-Measuring cup