

Welcome to SI4 20.109!

Hello.
Better!

1. Introductions & 20.109 Mission
2. Semester Overview & Intro to Wiki
3. Day-to-Day Operations
4. Lab Safety
5. Lab Tour (...your first protocol!)

❖ Aim 1: Authentic Investigation

- we follow REAL protocols
- answer ~~g~~ unanswered questions
- you make the decisions

❖ Aim 2: Authentic Communication

- if you can't communicate it \Rightarrow
you didn't understand it
- we will teach you \rightarrow best practices

❖ Aim 3: Extensive Collaboration (...with limits)

Equal contribution to team assignments.

Fair discussion, but independent completion, of individual assignments.

Semester overview: *the 20.109 wiki*

OpenWetWare
Share your science.

navigation

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- Add a Lab Notebook

research

- Materials
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contributing authors

- AqiStachowiak

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20.109(S14)

20.109(S14): Laboratory Fundamentals of Biological Engineering

Home Schedule Spring 2014 Assignments
Module 1 Module 2 Module 3

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Welcome and Details for Spring 2014

[openwetware.org/wiki/20.109\(S14\)](http://openwetware.org/wiki/20.109(S14))

Semester overview: *the 20.109 wiki*


1. Navigating around the wiki.
2. Important links:
 - Schedule Spring 2014
 - Assignments
 - Module 1, 2, 3
3. Some hints for making the most of the wiki. *This is your first stop*
4. The 20.109 wiki: *your new best frenemy*

The secret to 20.109: *Time Management*

Assignments in 20.109

Major Assignments

[\[edit\]](#)

Most major assignments will be submitted on submitted on [Stellar](#)  .

Module	Topic	Assignment	% of Final Grade	Links to Description and/or Evaluation
1		Abstract and data summary	15	Assignment description
		Primer design memo	5	Assignment description
		Journal club presentation	10	Sign-up for article Evaluation rubric (PDF download)
2		Research article	25	
3		Research idea presentation	20	Assignment description Evaluation rubric (PDF download)
		Mini report	5	

Minor Assignments

What's going to happen in lab:

- Turn in 'for next time' (FNT) - receive graded assignments

- Lab Treat:



<http://my.clevelandclinic.org/heart/prevention/nutrition/chocolate.aspx>

10 min
1:05 pm

- Pre-lab lecture & discussion
- The fun stuff
- The key to daily 20.109: *The wiki is your friend*

Lab safety: environments

- At the benches
 - coverage (closed-toe shoes etc.), gloves: ~always
 - nitrile gloves at gel bench
 - glasses: optional unless *flame, chemical splash*
 - lab coat: optional *→ BLZ*
- At the fume hood
 - glasses, lab coat, gloves: always
- In the tissue culture (TC) room
 - lab coat, gloves: always (except today)
 - no cross-contamination with main lab! (even today)
- Just in case... eyewashes, shower

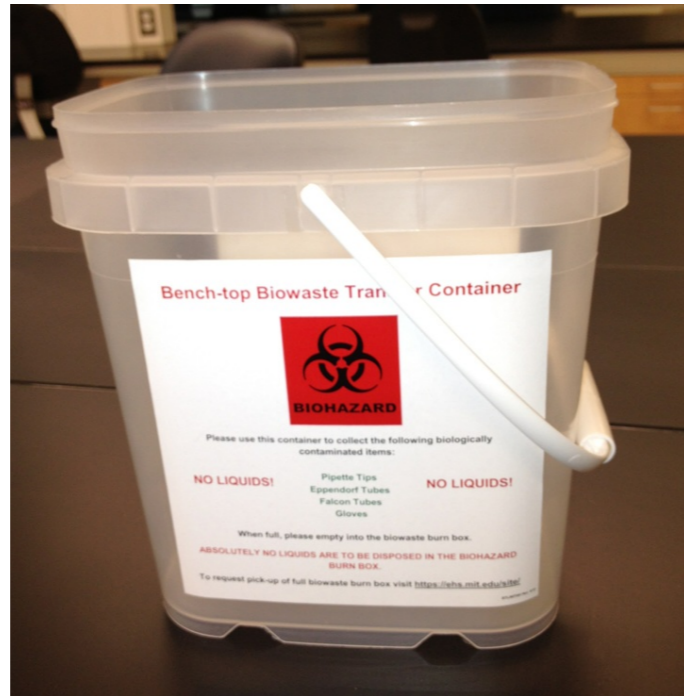
Wash your hands.

Lab safety: material hazards

- Chemical
 - caustic
 - toxic (acute, mutagenic, or other effects)
- Biological
 - infectious
- Minor
 - irritants
- Related waste disposal (infrequent)
 - chemical waste in fume hood (tubes → us)
 - biological liquid waste is bleached (vacuum traps)
 - see also posted sink-safe lists

Lab safety: waste disposal (frequent)

general



true sharps



biological solids



burn box

all ends up here!

Lab Notebooks: Evernote (EN)

The screenshot displays the Evernote web interface for user 'shannon_hughes_20109'. The interface is divided into three main sections: a left sidebar, a central note list, and a right-hand note editor.

Left Sidebar:

- Shortcuts:** A box with the text "Drag notes, notebooks or tags here for quick access".
- Notebooks:** A list containing "All Notes (1)", "shannon_hughes_20109's no... (1)", and "Trash (1)".
- Tags:** A section for organizing notes, currently empty.
- Evernote Web Clipper:** A button labeled "Download Now" with the Evernote logo.

Central Note List:

- All Notes:** The selected notebook view.
- Wednesday, 9/4/13:** A note created 1 hour ago. The content is: "Orientation lecture -- last four slides Pre-lab lecture -- add EN and 'new stuff' slide Demo of Evernote Better explanation of new safety workflow".

Right-Hand Note Editor:

- Header:** "shannon_hughes_20109's notebook" with options for "SHARE", "INFO", and "TOOLS".
- Formatting:** A toolbar with options for "Font", "Size", "A" (background color), "B" (bold), "I" (italic), "U" (underline), and icons for list creation, link insertion, and deletion.
- Note Content:** The note is titled "Wednesday, 9/4/13" and contains a bulleted list:
 - Orientation lecture -- last four slides
 - Pre-lab lecture -- add EN and 'new stuff' slide
 - Demo of Evernote
 - Better explanation of new safety workflow

Footer: "View Options" and "1-1 of 1 notes".

Lab Notebooks: Evernote (EN)

Please see the wiki page about lab notebooks (Assignments tab) and set up an Evernote account and 20.109 lab notebook.

Please use your name in the title of your notebook.
For example: 20.109(F14)_Shannon

Share your lab notebooks with:
me (skhughes50@gmail.com)
and
Chris (cbandoro@mit.edu)

Today in the lab:

- Find your lab partner, pick your bench, and sign up on the lab map up front!
- Complete lab tour *~ 4.15pm EHS*
- Check out the 'For Next Time' for next time.
- Respond to the Office Hours doodle poll I sent out.