

Welcome to S15 20.109!

Shannon

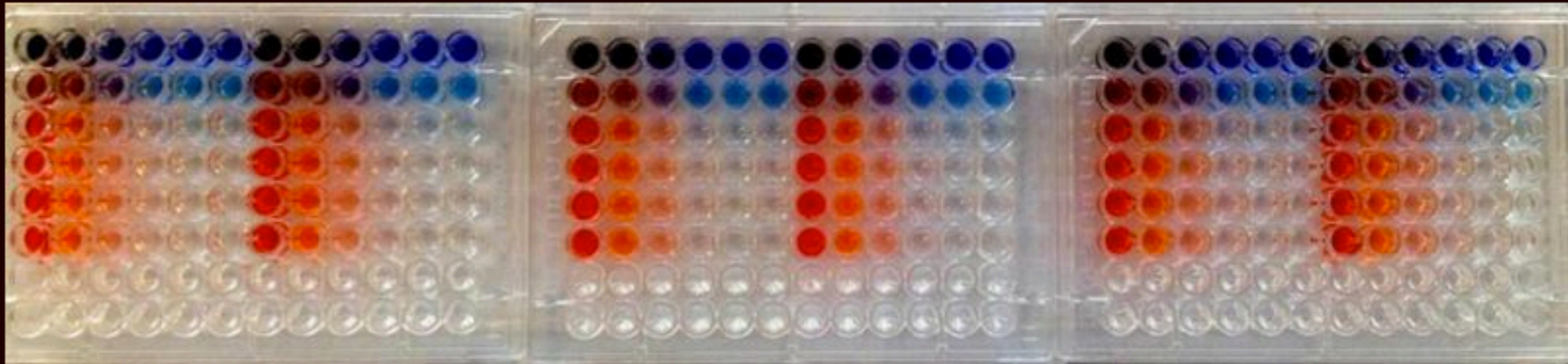
1. Introductions & 20.109 Mission
2. Semester Overview & Intro to Wiki
3. Day-to-Day Operations
4. Lab Safety
5. Lab Tour (...your first protocol!)

Your new best friend: *the 20.109 wiki*

[page](#)[talk](#)[view source](#)[history](#)

20.109(S15)

20.109(S15): Laboratory Fundamentals of Biological Engineering

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Welcome and Details for Spring 2015

Lecture: T/R 11-12 (16-220)

Lab: T/R 1-5 or W/F 1-5 (56-322)

People: Instructor and student web pages may be found at the linked [People](#) page.

Welcome to 20.109! For some of you this will be the first time in a research lab and for others it will not; either way, it is our goal to make this class a useful and fun introduction to experiments and techniques in biological engineering. There is not time enough to show you everything

[openwetware.org/wiki/20.109\(S15\)](http://openwetware.org/wiki/20.109(S15))

Semester overview: *the 20.109 wiki*

1. Navigating around the wiki.
2. Important links:
 - Schedule Spring 2015
 - 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: *is your best friend*

The secret to 20.109: *Time Management*

Assignments in 20.109

Major Assignments

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	Assignment description
3		Research proposal presentation	20	Assignment description Evaluation rubric (PDF download)
		Mini report	5	Assignment description and evaluation rubric

Daily Work:

What's going to happen in lab:

- Turn in homework- receive graded assignments



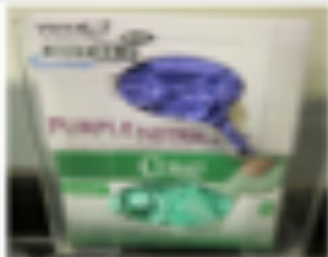
- Lab Treat:



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

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

Personal Protective Equipment (PPE)

Item	Required	Recommended
Safety glasses 	<ul style="list-style-type: none">• At hood.• When using ethanol burners.• Add face shield at UV transilluminator.	<ul style="list-style-type: none">• Large quantities of liquid or powder (even if not strictly hazardous) due to chance of irritation by splash, dust, etc.
Lab coat 	<ul style="list-style-type: none">• At hood.• In TC room.	<ul style="list-style-type: none">• See above.
Gloves 	<ul style="list-style-type: none">• Working with hazardous materials (w/r/t chem or bio).• Nitrile for greater hazards (e.g., EtBr).	<ul style="list-style-type: none">• Working with any material.• Touching gloves-on equipment.

Managing Biological Waste

Benchtop biowaste:

- pipette tips
- gloves
- conical/plasticware



Sharps jar:

- glass
- needles

Step-can:

- solid bacteria culture



Burn box:

- Everything
BUT
liquid!!

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 with a dropdown arrow, currently empty.
- Evernote Web Clipper:** A promotional banner for the Evernote Web Clipper extension with a "Download Now" button.

Central Note List:

- All Notes:** The header for the list.
- Wednesday, 9/4/13:** A note entry with a timestamp of "1 hour ago" and a preview of the note's content: "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 Bar:** Includes options for "Font", "Size", and text formatting (A, B, I, U, ...).
- Note Content:** The note title is "Wednesday, 9/4/13". The body 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

Bottom of Interface:

- View Options:** A button with a left-pointing arrow.
- Page Info:** "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

Djenet (xxxxx)

*find Djenet
mit address on
the wiki*

Today in the lab:

- Find your lab partner, pick your bench, and sign up on the lab map up front!
- Complete lab tour
- Check out the homework for next time — due on Thursday.
- Respond to the Office Hours doodle poll I send out.