

Presentation Overview

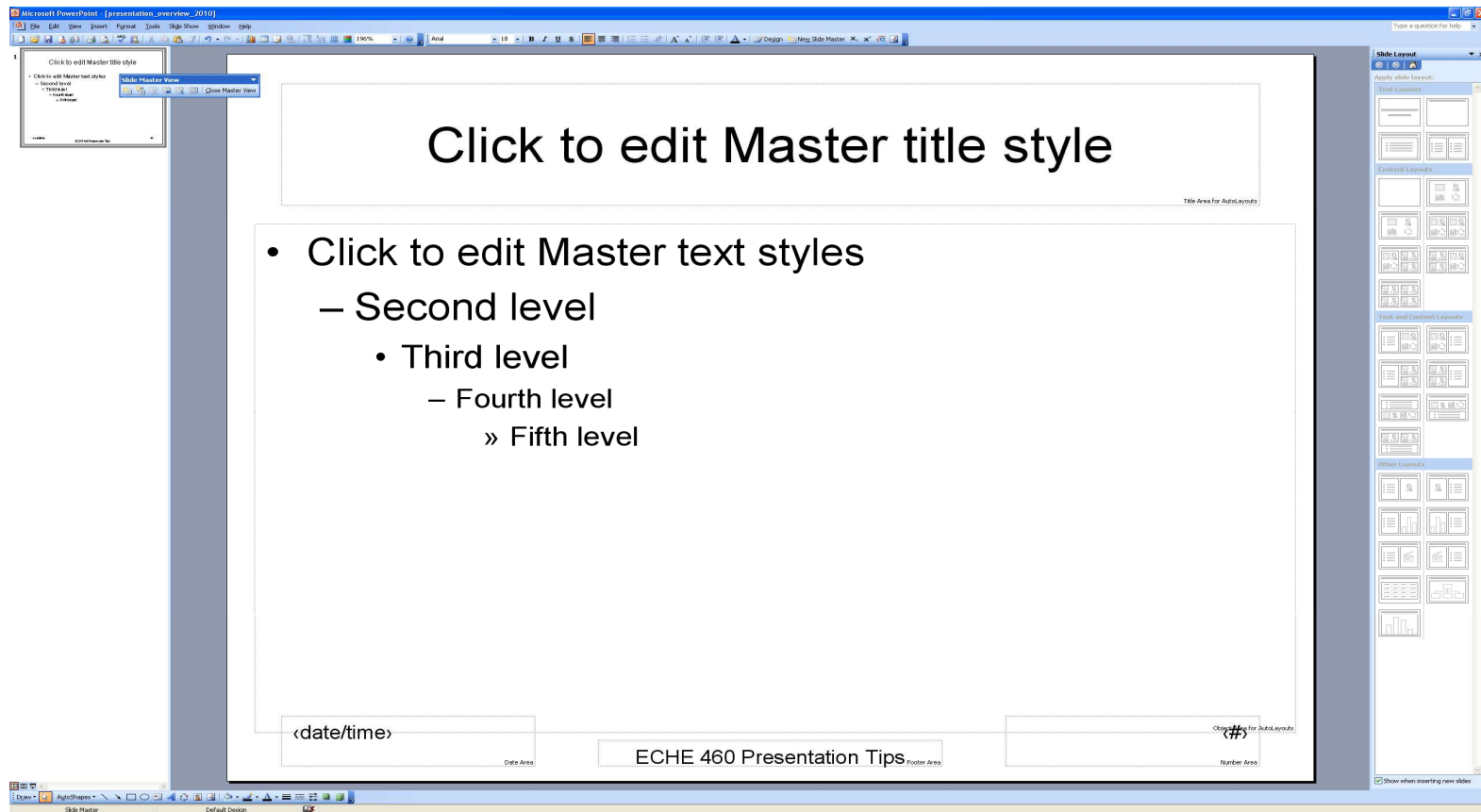
ECHE 460 2010

Ed Gatzke

Basics

- Learn Powerpoint (Use Slide Master)
 - Fonts (<40, > 24 typically)
 - Text box sizes (default is small)
 - Footer information (group and names/duties?)
 - Images and lines for slides

Slide Master



Basic Slide Tips

- Your introduction should be broad and interesting. Use pictures, cartoons, worldwide stats. Consider this Introduction and Motivation. Why does anyone care about this topic?
- Slides should contain enough information so that someone could follow without an oral explanation, but at same time not be so dense that a lot of reading is required.
- Do schematics in PowerPoint. **Paint will not be acceptable (in general)**
- Working Equations- Some text interspersed with equations is a good thing to tell the story.
- Results- Generally you should compare to a literature value, not literature data.
- Two figures on one slide is generally a bad idea, too much information.
- Some text along with a figure can be useful.

Basic Slide Tips

- **Again, data in symbols, model in connected line without symbols.**
- Use citations in your slides (top, under title, smaller font?) Sometimes partial citation can be used (author et. al, 2002). Cite text books, journal articles, web pages, lab manual.
- **Literature reviewed can include one or two slides per paper. Include the full reference (author, title, journal, year, volume, pages) Hit the high points, methodology, application, main results. Maybe grab an image or figure / sketch from paper.**
- Citations can be smaller than standard text, 12 pt (but still legible)

Basic Slide Tips

- Make the slides consistent. Titles and text (generally) same font size, capitalization, punctuation, etc.
- Use the same bullets throughout (and don't use simple text block with bullets)
- You will be expected to show some error analysis or statistical analysis on presentations
- Put your names and E1, E2, E3 on your slides (possibly as a footer)
- You may want pictures of E1 E2 E3 on the title slide
- You may want to put a simple outline on your title slide

Basic Slide Tips

- Use transition slides. Show the simple outline from the title but expand the next section bullet point in more detail. Bold the next section text, gray out the other sections (and smaller?).
- Use pictures of the equipment if needed in addition to the schematic
- **Make coherent schematics. Maybe use a second slide with a complex piece of equipment broken down in more detail. Show manual valves and sensors appropriately. Show process flow and information flow.**
- **Use animation when needed.**
- Show what values are held constant, that are changed, and are measured.

Basic Slide Tips

- Have a written experimental plan / procedure. Detailed but not too detailed...
- Do not read from a script. Your talk needs to be spontaneous.
- Learn to use subscripts and superscripts for items. Also, variables usually are in italics, for example: $x_1 + x_2 = 1$
- Learn to use “slide master” in Powerpoint. You are not constrained to standard templates. This will allow you to set title and bullet font sizes, location and size of footers, size of default bullet boxes (for more space than default), or add an image (USC or other)
- Complex equations should include some nomenclature (possible small font to fit). Variables generally should be defined at some point. You don't have to talk about all of the variables, but they should be on a slide.
- Use x not * for multiplication if needed. Usually, nothing is needed (maybe some space).

Basic Slide Tips

- Use tables for numerical data when appropriate (figures too). Do not put stuff in a paragraph of text that would be easier seen in a figure or table.
- Given data and a model, report some sort of information. Average absolute error, maximum positive or negative error, etc. This can be useful to compare multiple cases.
- Put figure legends on the side of the graph. Include units when possible.
- Don't include too many legends. Things like lines showing 95% conf. intervals for data don't really need a legend entry, just dashed gray lines. But state somewhere how you found confidence intervals (95 % conf, standard dev, standard error, min/max).
- Do not use apostrophes. Technical work should not have conjunctions or possessive use. Work around it.

Basic Slide Tips

- Use a new slide for crazy animations, or else appearing items may cover your text on the hard copy.
- Avoid use of animations unless it is really needed.
- Do not center blocks of text in bullet lists.
- Use a simple color scheme. No white text on blue and white background. No black text or lines on a blue background. No text on top of an image. Contrast is key.
- No crazy image backgrounds. Don't make people read your slides - You have to explain the content. Don't read your slides.
- Plan for about one minute per slide with 3-5 pieces of information.
- Consider use of “outline” transition slides between major sections or at handoffs.

Basic Slide Tips

- Make eye contact. Don't just look down at your slides or at the presentation.
- You should not talk with your back to the audience, looking at the presentation.
- Do NOT mumble, do NOT yell.
- You should NOT read your slides! You should know what information you need to talk about on each slide. You probably should not have the whole thing memorized, it will not appear “spontaneous”.
- Practice your talk. Note that you may talk faster when on the spot.
- Try to memorize a few introductory comments, < 5 sentences. You may want to include the title of your talk, who you are and who you work with, and a brief overview / outline. Memorized sentences help you get in a groove in case you blank.

Basic Slide Tips

- Avoid "Uh" and "Umm". You may not even know you are doing it.
- You are more effective if you quote numbers from memory, not rely on looking up on slide.
- Try to have some personality, but do not make it pure stand-up comedy.
- Don't use 12 (or 40) pt fonts. 24-28 is usually ok in Powerpoint. Similar for equations, should be legible but not huge.
- I personally like fragment bullet points, not full sentences.
- Use indentation with 2-4 items for sub-bullet points. Bullet points should not be more than 2 lines long.

Basic Slide Tips

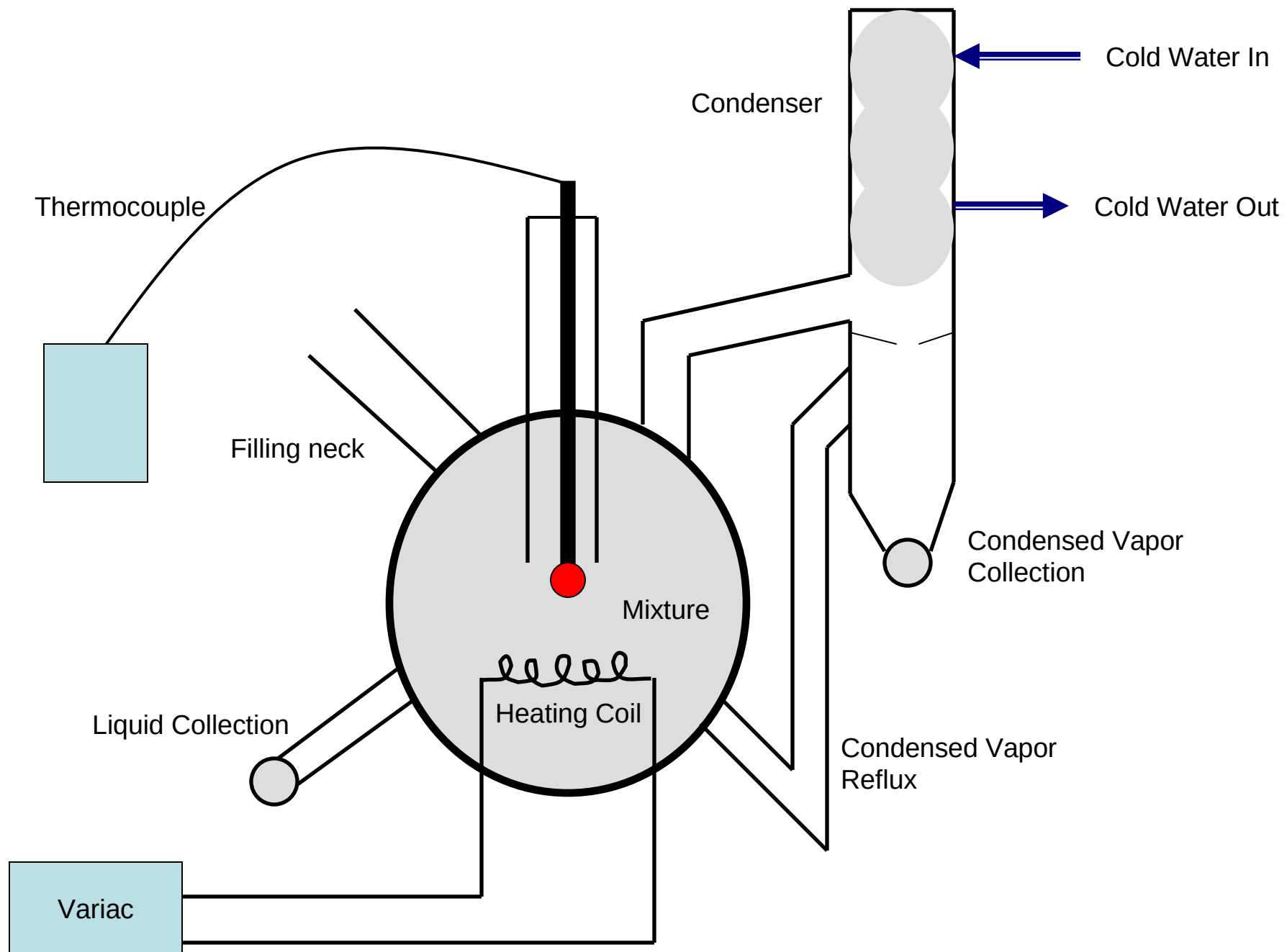
- If you have an orphan word (single word on next line) either add more to fill the second line or edit some out to bring the orphan onto the first line.
- No crazy colors or backgrounds. Make it professional looking.
- You may want to dress professionally (I will not reduce your grade, but it can't hurt)
- Know your audience and expectations for the presentation.

Basic Slide Tips

- Have a few "pocket slides" for stuff that may be an obvious question but you did not include in the presentation
- Some hand gestures can be good. No motion and too much is bad.
- Excessive silence is bad, try to fill dead air a bit.
- Do not hide behind a podium, move about if you can.
- Try to speak firmly and at a good pace.
- Watch out for different font sizes (autoformat)

Schematic Example

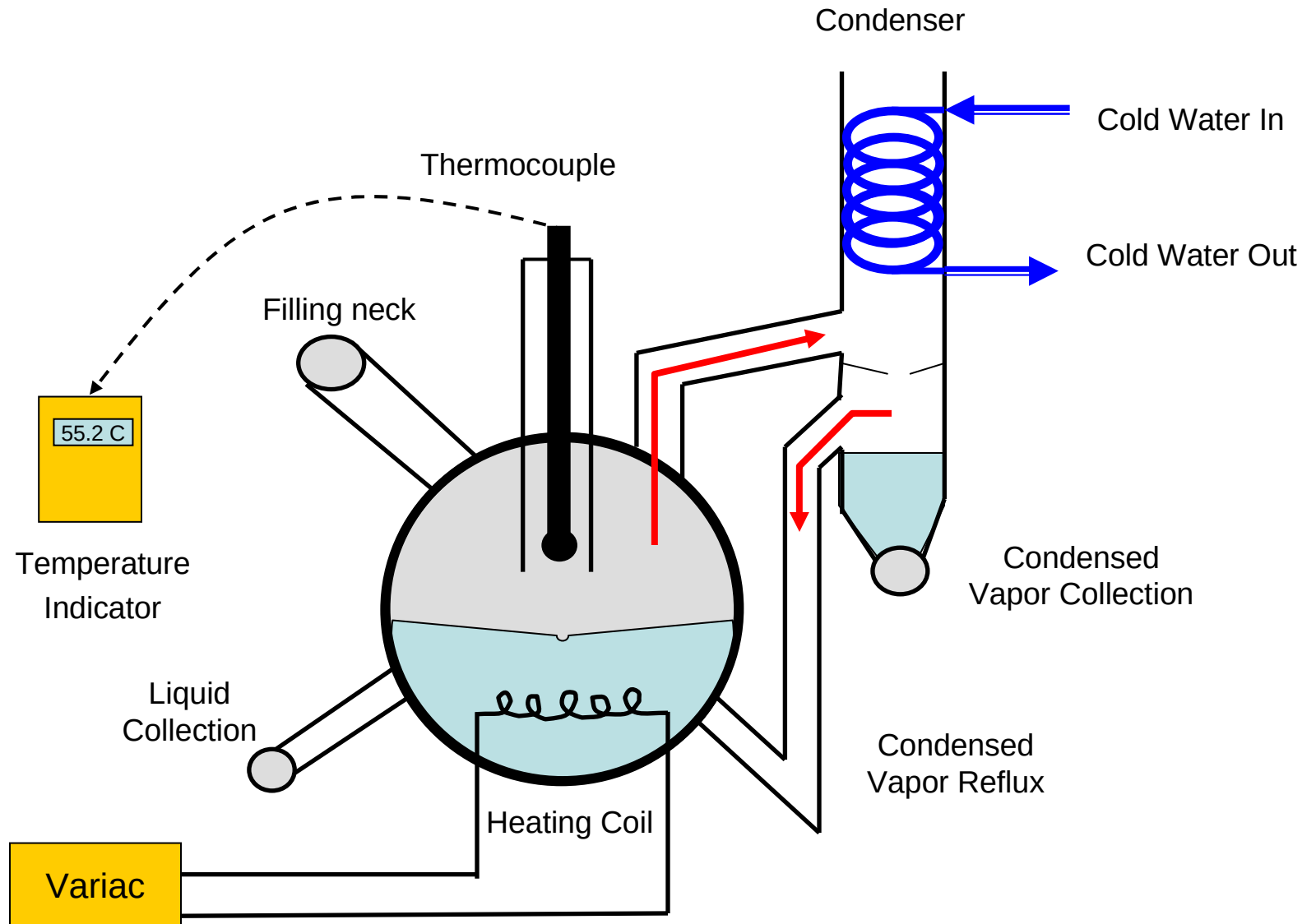
ECHE 460 2007
Ed Gatzke
with
?????



?????

- What is that?
- Where is the liquid?
- Where is information flowing?
- What physically is going on?

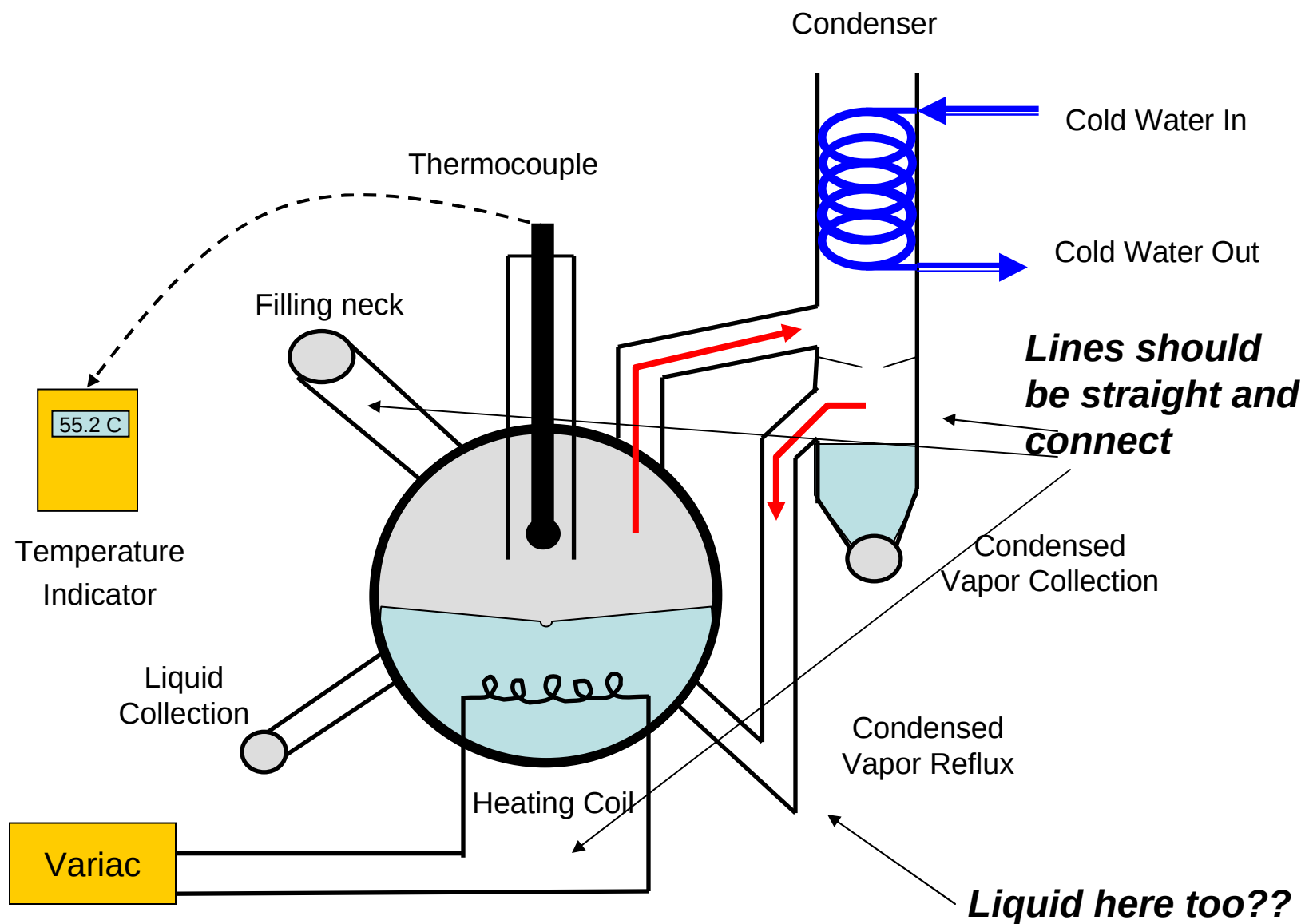
Apparatus



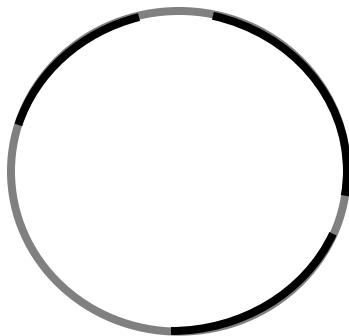
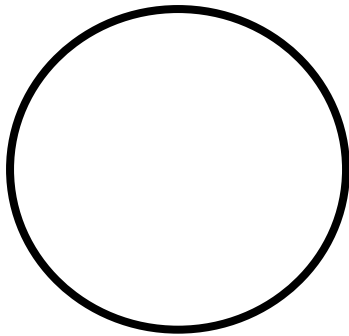
Still Awful

- Should fix line connection problems
- Try to use “Autoshapes/Freeform”
- Ideally, big circle would have “broken” spots where you have ports...?
- Items do not attach properly
- Use CTRL + Arrow keys for small steps

Apparatus



Suggestion for lines



Make circle

Make 90° arc “autoshape/basic shapes/arc”

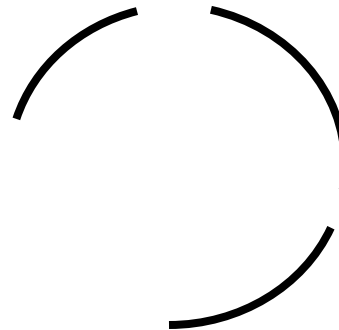
Make copies of arc

Flip copies “draw/flip”

Adjust angles

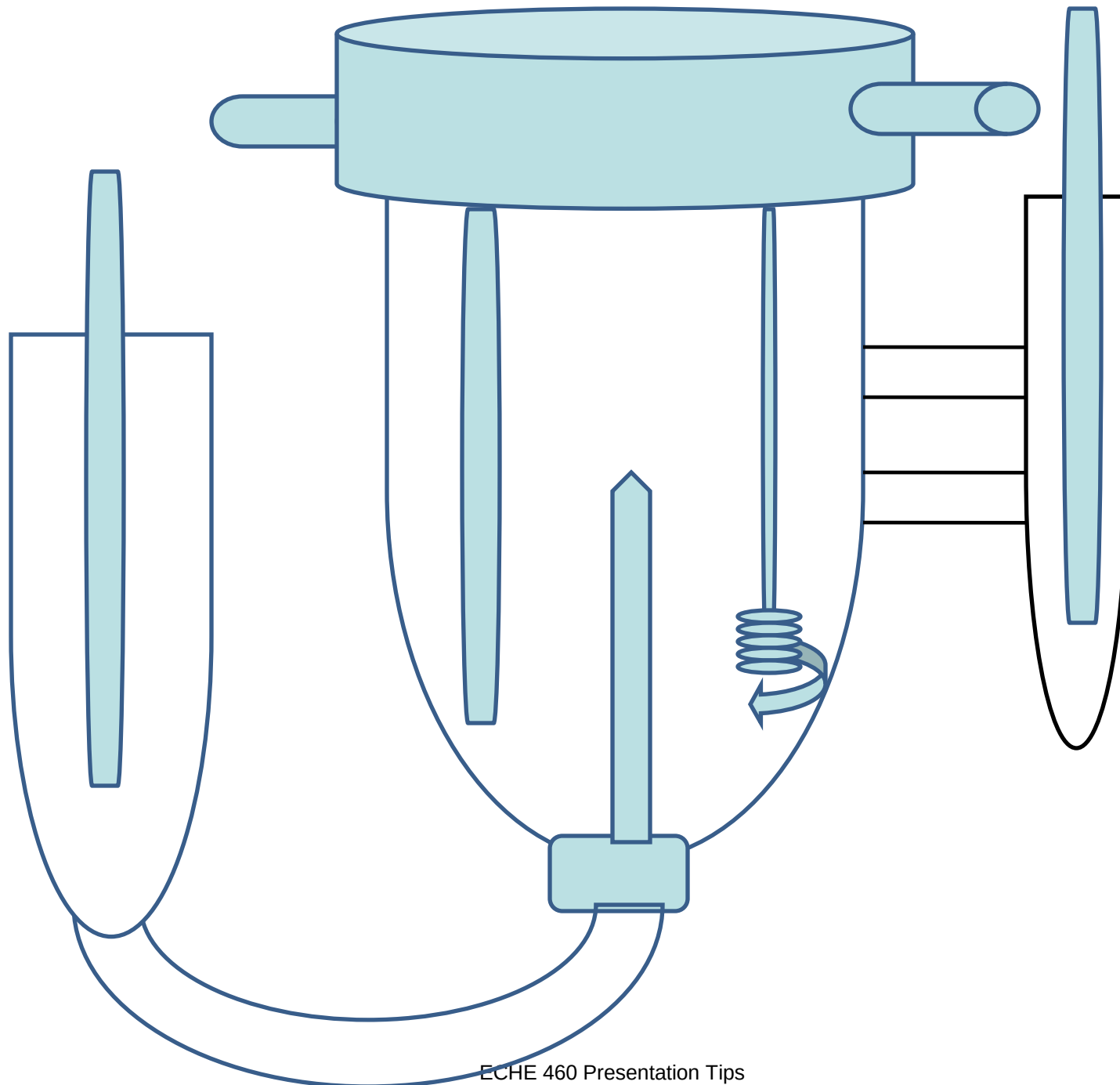
Make another copy or similar of different color

Use front/back to layer



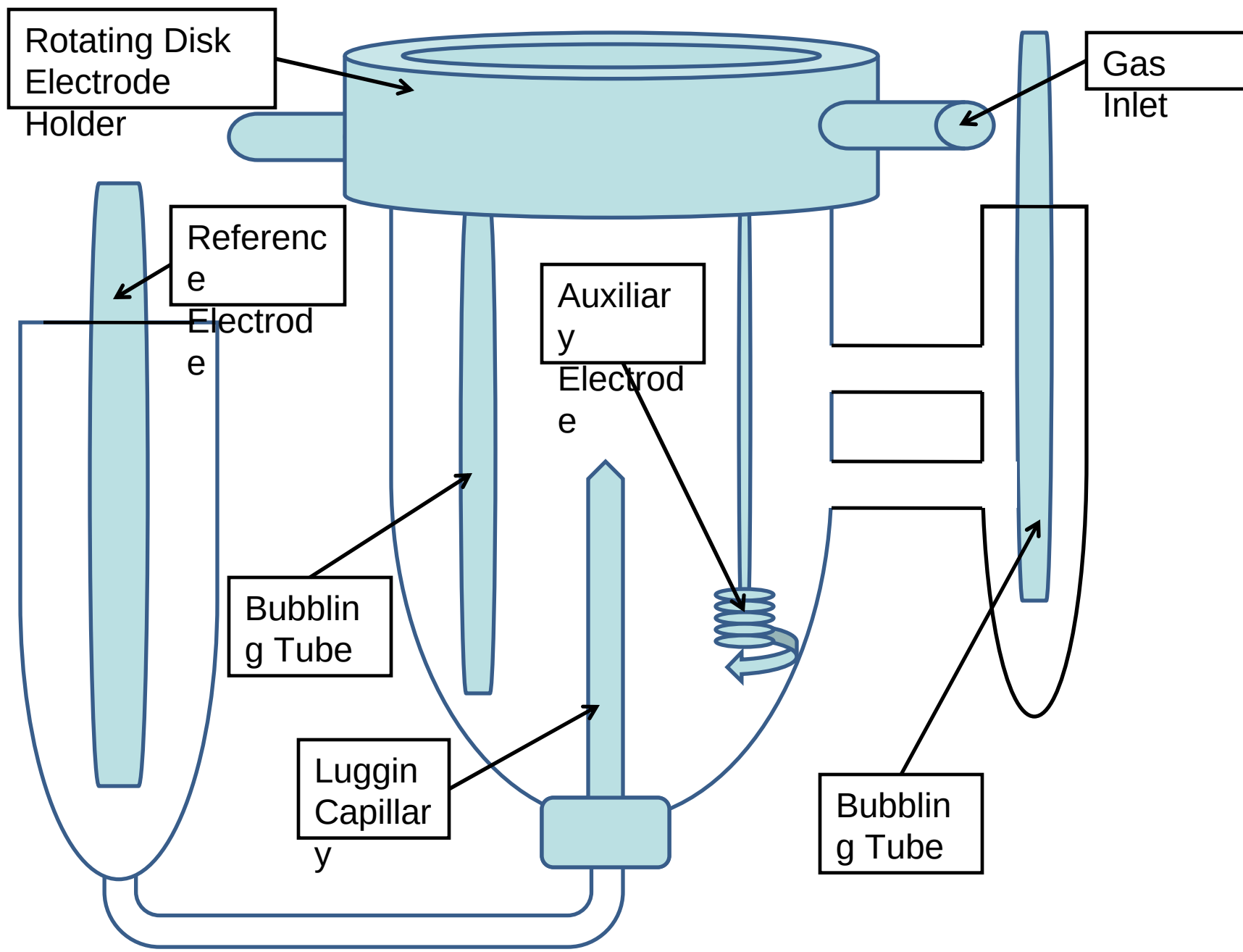
The Evolution of a Process Schematic

Cristina Kubicki
with
Ed Gatzke
ECHE 460 2010



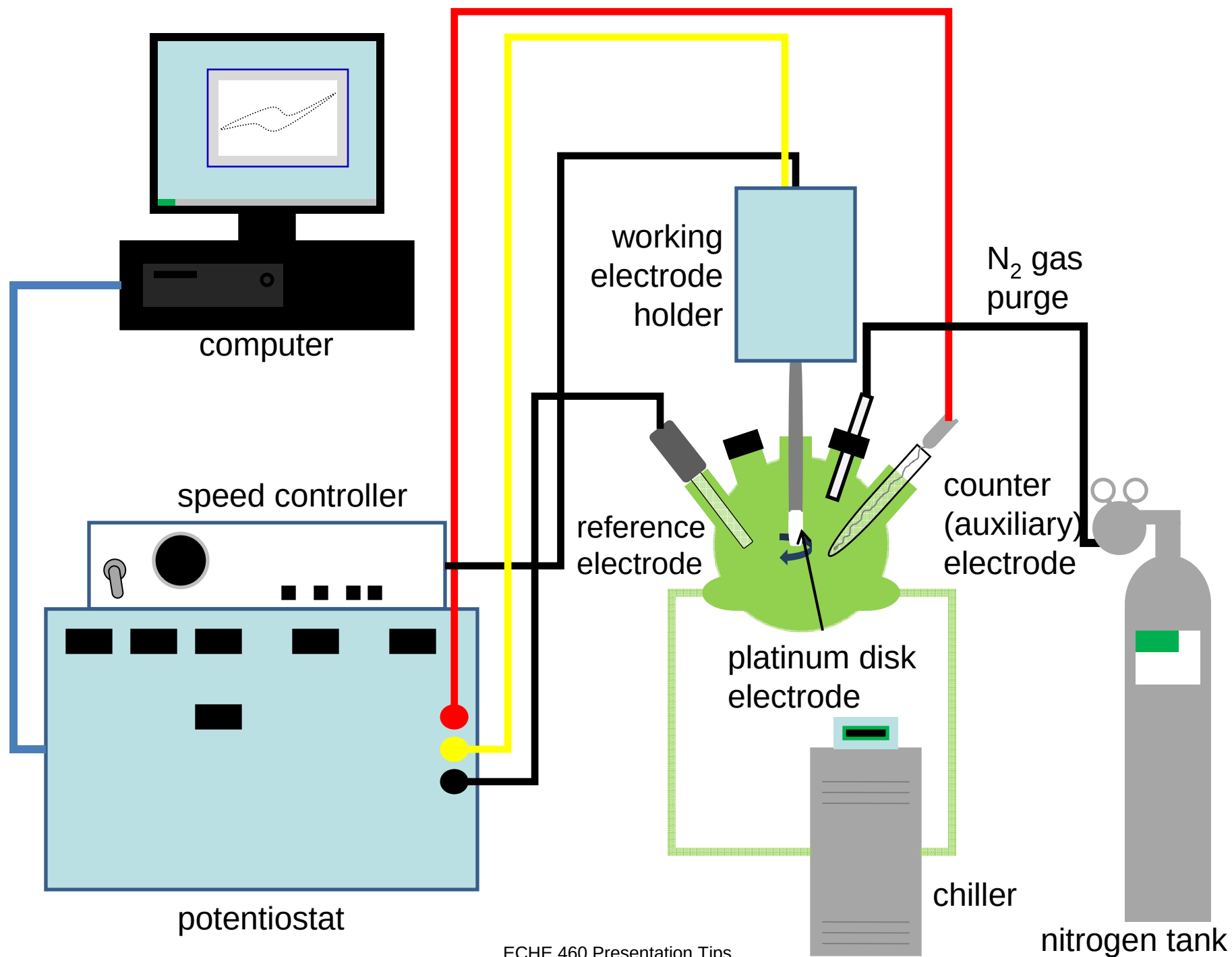
??????

- Needs labels!!
- What is going on?
- What is what?
- Instrumentation
- Monochromatic



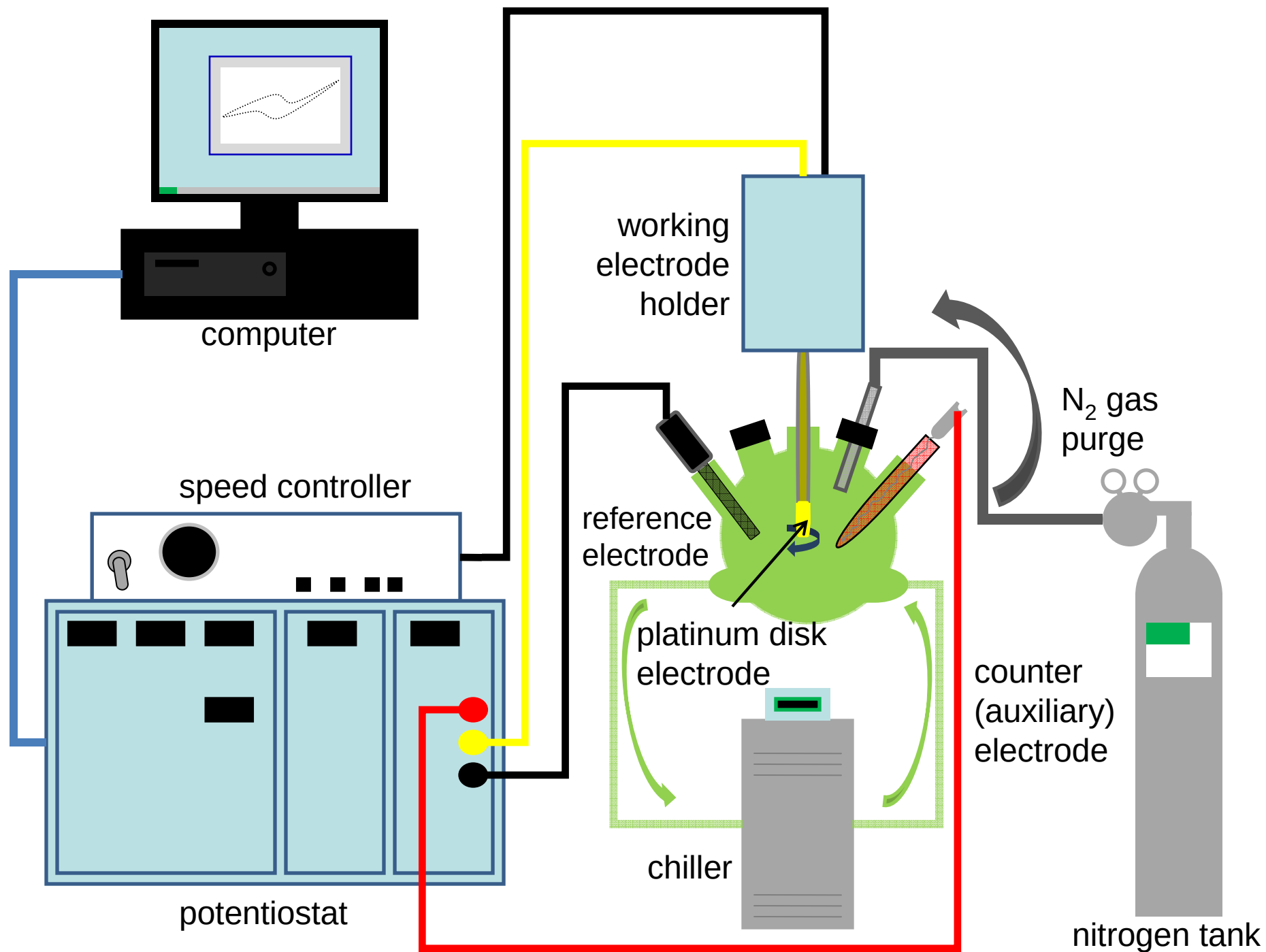
Better, but...

- Careful with Powerpoint versions
 - Save as older version compatible
- Still difficult to interpret
 - Some areas are not connected where a pipe comes into a vessel (overlap)
 - Lack of color



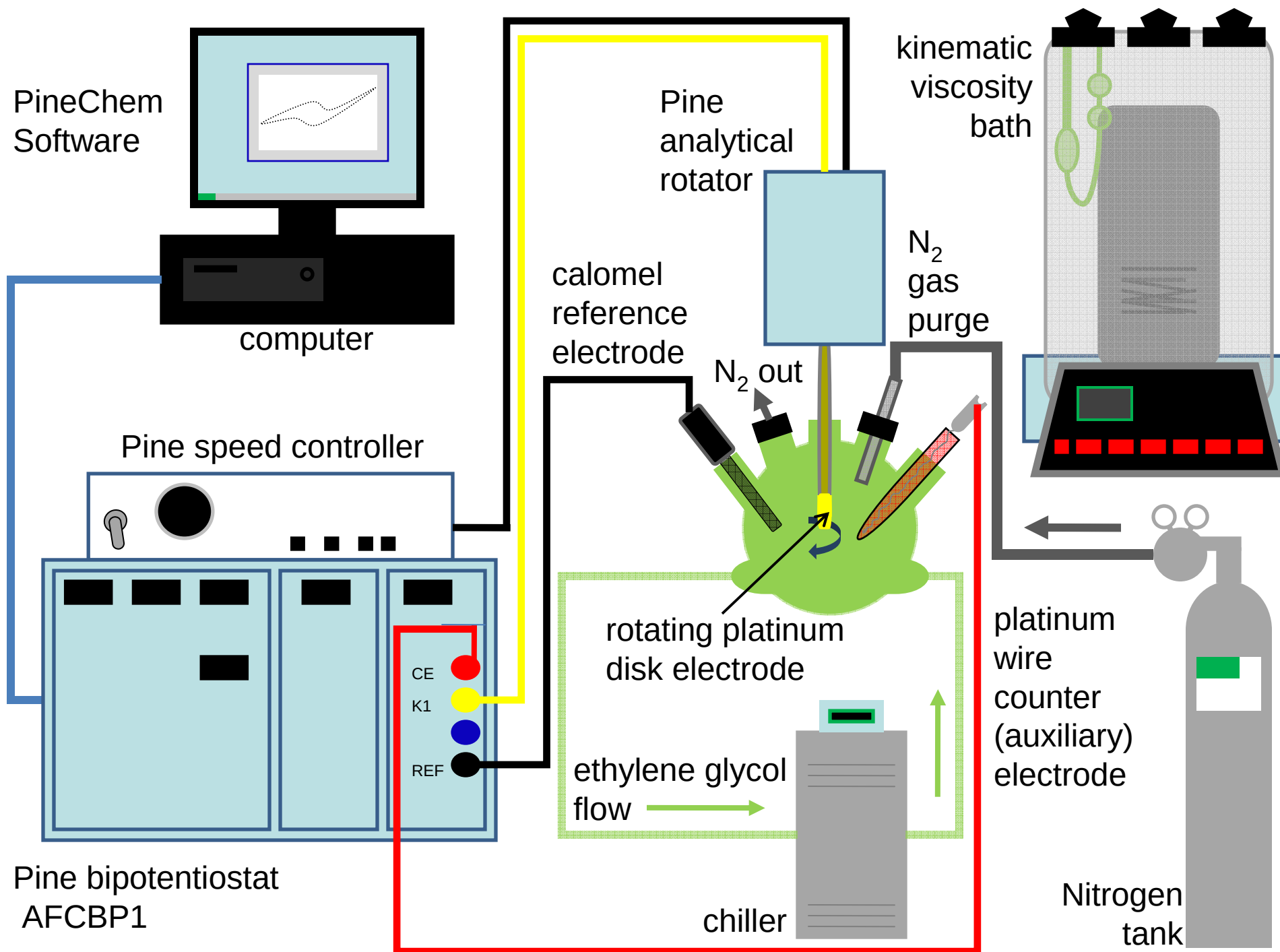
Even Better Still!

- Nice color scheme to differentiate
 - Could be more clear / consistent. Maybe make the electrodes the same color as the wire?
- Could show the chiller bath recirculating with arrows?
- Is there a N₂ exit? Arrows there could help for flows.
- The wires get a little confused.
 - Minimize crossovers



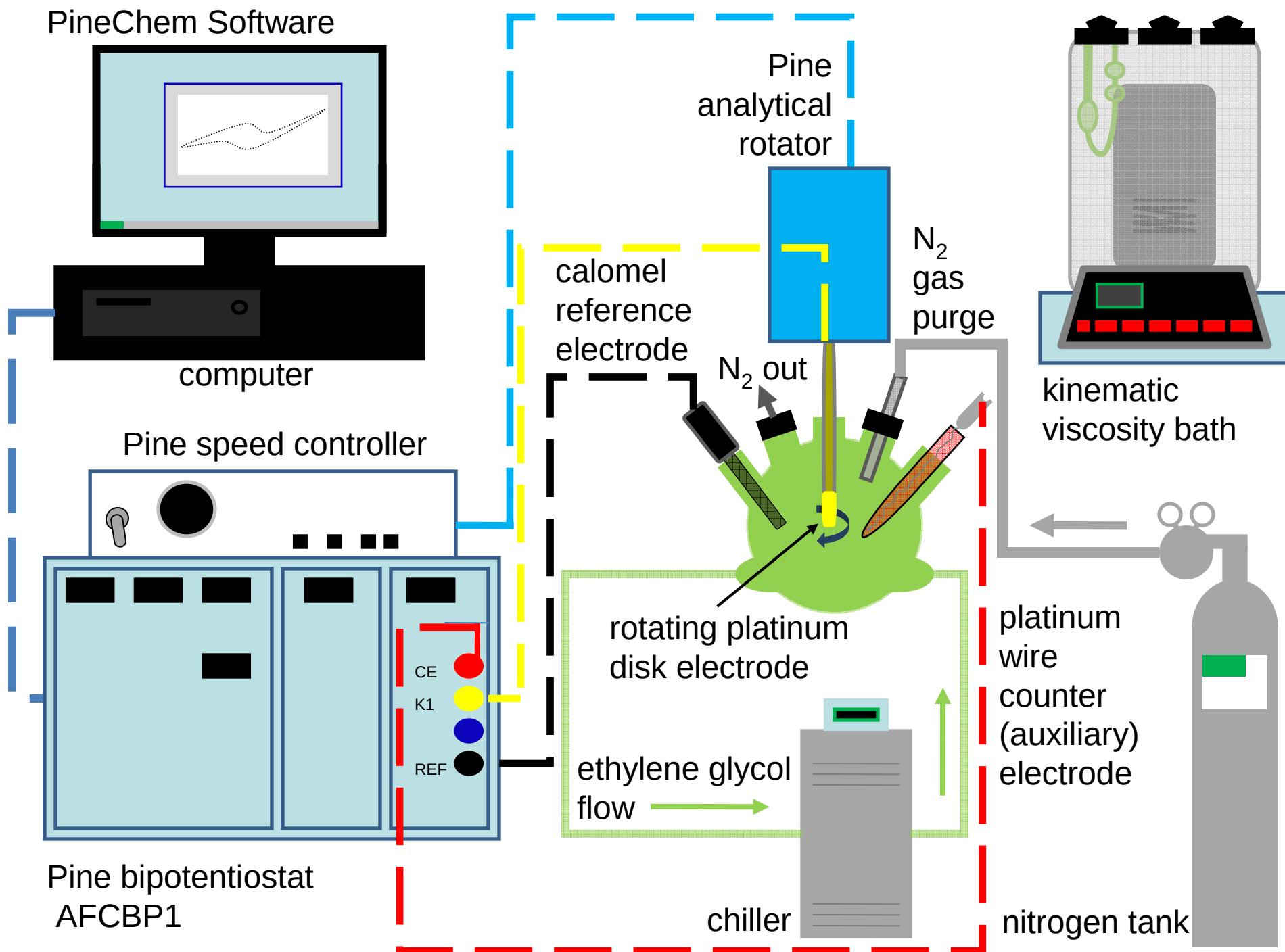
Almost There!

- The curved arrows appear to make something is rotating, a bit confusing.
- Maybe label it rotating platinum electrode? The arrow is a little odd and confusing.
- May need to remove footer from slide
 - View > header footer > apply (not apply all)



Almost Final Comments

- Labels should be consistently capitalized (All or first only typically)
- Data flows could be dashed / dotted
 - Distinguish from flow in a pipe
- Put viscosity bath on separate slide with detail?
- May resize a bit, auxiliary stuff too big?
- Connect yellow wire to electrode
- More contrast on colors (black vs blue vs gray)



Final Comments

- Some equipment still too big
- Capitalization
- Separate speed control from potentiostat?
- Center text in boxes?
- Arrows to some equipment from labels?
- Consider text color-code as well?
- Consider staged animation for complex slide

