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| **Date** | **Module** | **Topics** | **HW Due** |
| Sun 5th pm | Welcome | Course structure, motivation. Mystery Tubes. |  |
| Mon 6th am | Lab **1** | **Pipetting. Env. Iso**. Discussed variation in data.  Prepped Phage Assay | **1** |
| Mon 6th pm | Lab PBL **1** | Writing on what interests them.  What makes something “science”? |  |
| Tue 7th am | Lab **2** | **Observe Env. Iso.**  **Plaque Assay. Microscope work.** | **2** |
| Tue 7th pm | Lab PBL **2** | How science is done investigating Infect. Disease.  Childbed fever Case Study. |  |
| Tue 7th eve | *Lecture 1* | *Innovation Spread: Lessons from HIV* (Talbert-Slagle) |  |
| Wed 8th am | Lab **3** | **Plaque Counting.** Explain Transformation Biol. **GFP Transformation. Kirby-Bauer. Motility.**  Talk through steps and biochemistry of Gram Stain. | **3** |
| Wed 8th pm | Lab PBL **3** | Overview lecture of Infectious Disease.  Choose Presentation Groups, start work. |  |
| Wed 8th eve | *Lecture 2* | *Drinking from the Firehose: Infectious Disease in the Age of Big Data* (Hoen) |  |
| Thu 9th am | Lab **4** | Tabulate Kirby-Bauer results, find Avg. & St. Dev.  Observe Transformation & Motility.  **Gram Stain & Microscope work.** | **4** |
| Thu 9th pm | Lab PBL **4** | Discussed Science & Ethics of “Big Data” talk.  “How to Read a Sci. Article”: *Phlebovirus*  paper. |  |
| Fri 10th am | Computer **1** | How we use computes in Sci. Intro to Excel, computing stats and graphs form lab data.  Growth Exercise Excel activity. | **5** |
| Fri 10th pm | Computer **2** | Choose a table form Semmelweis paper, plot it and present to class. McCandless TED talk.  Motivated SIR models in epidemiology. |  |
| Mon 13th am | Computer **3** | SimUText SIR program: Worked through section 1 together, let them explore Section 2. | **6** |
| Mon 13th pm |  | Faculty Research Talks 1 |  |
| Mon 13th eve | *Lecture 3* | *Killing Persistent Myco. Tuberculosis* (Jacobs) |  |
| Tue 14th am | Computer **4** | Gave Flu quiz. Discuss articles on flu drugs, did computer research on these drugs.  Library session on Internet Searches: Betsy Cawley | **7** |
| Tue 14th pm | Computer **5** | Discussion: How to convince Bard students to get Flu Shots. Work on final presentations, discuss. |  |
| Wed 15th am | Computer **6** | Use SimUText SIR program to calculate infection rate for different vaccination levels, demonstrate Herd Immunity. Present results of computer work. |  |
| Wed 15th pm | Computer **7** | Zombie Apocalypse as a way to build an SIR Model.  Predator-Prey Models. Let them loose on EteRNA. |  |
| Wed 15th eve | *Lecture 4* | *City Farms for City Dwellers* (Despommier) |  |
| Thu 16th am | PBL **1** | Overview lecture on Anti-Microbial Resistance.  Discussed Levy paper, dissected Forsberg paper. | **8** |
| Thu 16th pm | PBL **2** | CE Training (1 hour).  Case Study: Dr. Collins & Mystery Infection. |  |
| Fri 17th am |  | CE Session with Germantown 8th graders. | **9** |
| Fri 17th pm | PBL **3** | Assigned roles to follow, then watched *Contagion*. |  |
| Mon 20th am |  | Faculty Research Talks 2 | **10** |
| Tue 21st am | PBL **4** | Discussed *Contagion*, how various people acted.  Watched and discussed PBS *Vaccine Wars.* | **11** |
| Tue 21st pm | PBL **5** | “Lady Tasting Tea” activity using colored M&Ms.  Lecture on Conditional Probability.  Walked through Fisher Paper on Lady Tasting Tea. |  |
| Wed 22nd am | PBL **6** | Passed back papers on Ewald ‘s papers & TED Talk.  Discussed disease treatments that would not involve so much Anti-biotic use – Biology behind strategies. |  |
| Wed 22nd pm | PBL **7** | Final presentations. |  |