Day 1 – Thursday July 8, 2010

7:30  Breakfast in Commons

8:30  Introductions (go around room)

Dana 146  What is synthetic biology? (discussion)
Defining synthetic biology (Laurie)
How is synthetic biology suited for multidisciplinary research with undergraduates? (Jeff)
What are the goals of the workshop? (discussion - Todd)
Our goal is to provide the environment for you to meet your goals. (go around room)
What makes a good project?
  1) Where is the connection to another discipline?
  2) What is the biological implementation?
  3) How can the project be communicated effectively?
  4) Does the project have stages and milestones?

9:30  Introduction of Biobrick assembly scheme, Registry (Malcolm)

Dana 220/256  How to assemble existing parts
How to comb the registry
In class assignment: How would you build….?

10:30  Break – refreshments on 2nd floor Dana, west end of hallway

11:00  Synthetic biology project examples
Dana 146  Presentations on medicine (Jeff), energy (Malcolm), the environment (Todd), technology (Laurie)
12:00 Lunch in Commons (Bill Hatfield computer scientist as guest)

1:00 Explore the 2009 iGEM Wiki (Jeff)
Dana 146

1:20 Work as pairs of participants – explore to find a topic
Dana 220/256

2:00 Report iGEM project examples explored above
Dana 220/256

3:00 Break – refreshments on 2nd floor Dana, west end of hallway

3:30 Wet lab work
Dana 146 Discuss methods for obtaining Registry parts or building new parts

Dana 220/256 Start PCR for building a new part (β-lactamase subparts)
    pipet and boil oligos for assembly of new part
    (E. coli promoter gcVR + RBS; clone into RFP)

5:30 Dinner at Commons

7:30 Past Synthetic Biology Projects at MWSU and Davidson
Dana 146 (BPP= Jeff, HPP Laurie, XOR = Todd, SAT = Malcolm)

End of Day 1
Day 2 Friday July 9, 2010

7:30 Breakfast in Commons

8:30 Reflect on previous day, get feedback on workshop so far and planned
Dana 146

9:15 Birds of a Feather discussions
Dana 220/256 (Bio feathers and non-Bio feathers)

10:00 Ethical issues discussion
Dana 146 (Todd: create life, playing God, environmental, bioterrorism)

10:30 Break – refreshments on 2nd floor Dana, west end of hallway

11:00 Participant pairs work on plans
Dana 220/256 Brainstorm project ideas, develop area of interest, project ideas

12:00 Lunch in Commons
Bioethicists joins us for lunch: David Perry, Andy Lustig (?), Kristie Foley, Lance Stell (?)

1:00 Discuss lab methods and practices
Dana 146 Wikis, GCATalog, sharing protocols online
Discuss what is about to come in lab

2:00 Lab work
Dana 220/256 Run PCR products on gel
Ligate oligo assembly (to cut GFP + plasmid)
Give them a mini-Registry (Todd)
Transform oligo ligation
Take gel pictures

3:00  Break – refreshments on 2nd floor Dana, west end of hallway

3:30  pairs  Work in pairs on topics for project presentation/discussion
Dana 220/256  Use wiki to post projects/ make PPT

5:30  Dinner at Commons

7:30  Presentation by NSF Program Officer
Dana 146

End of Day 2
Day 3 Saturday July 10, 2010

7:00      Breakfast in Commons

8:30      Observe colonies and discuss results
            Dana 220/256

9:00      Divide into two groups based on participant project topics
            Dana 220/256  Allow 15 minutes for each pair for presentation/discussion/feedback

10:30     Break – refreshments on 2nd floor Dana, west end of hallway

11:00     Closing moments and workshop assessment
            Dana 146    Gather belongings, transportation to airport, etc.

12:00     Workshop finished