## SEED Academy, Spring 2011 **Synthetic Biology Module**

Homework #4 Due March 12, 2011

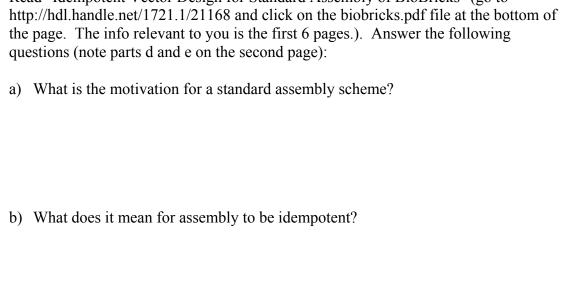
## 1) Back to your Final Project

Come in prepared to discuss your ideas with your classmates, TA and instructors! They certainly do not need to be "perfect" ideas at this very moment, but, considering the work you have done so far on them including beginning to gather real world information about organisms and biological interactions/systems interfaces, you should have some idea of the actual biology behind your project.

As always, please feel free to send us questions.

## 2) BioBrick Standard Assembly

Read "Idempotent Vector Design for Standard Assembly of BioBricks" (go to



c) What are the 4 standard enzymes used in BioBricks assembly?

d)	What enzymes should be used to cuback of another part?	t a BioBrick part that we wish to add to the
e)	dicate the recipe for a ligation of a plasmid and an insert. Your plasmid is 3000 and the insert is 1000 bp. Assume that all nucleotides are 1000 Da. Assume at you want 1 nM concentrations of each of the DNA components in your gation.	
	Plasmid (10 ng/μL)	μL
	Insert (50 ng/μL)	μL
	Ligation Buffer (10X)	μL
	T4 DNA Ligase (Enzyme)	_ <u>0.5</u> _ μL
	Water	μL
	Total	10 uL