Lecture Topic	HW Sched	Project	Reading
Class Overview - Synthetic Biology Introduction - What, who, why, how			
Synthetic Biology Introduction - Biology Primer, Parts, Devices, Systems			
Synthetic Biology Introduction - Experimental Processes Primer			#1 Discussion
Synthetic Biology Introduction - Automation/Software Primer			
Specification - Overview, Approaches, Challenges	**HW1 - Genetic Circuit Design**		
Specification - Structure, Constraints, Design Spaces			
Specification - Function, Performance			#2 Discussion
Design - Overview, Approaches, Challenges			
Design - Transformation, Mapping, and Assignment			
Design - Design of Experiments		**Pre-Project**	#3 Discussion
Assemble - Overview, Approaches, Challenges			
Assemble - DNA assembly planning and dynamic programming			
Assemble - Liquid handing and scheduling			
Spring Break			
Spring Break			
In Depth Topic - SBOL, Standards	**HW2 - Microfluidic Design**	**Project Start**	#4 Discussion
In Depth Topic - Codon Optimization, Sequence Analysis			
In Depth Topic - Registries, SynBioHub, and Data Models			
In Depth Topic - Modeling and Simulation	**HW1 Due**		
In Depth Topic - Data mining, pattern analysis, machine learning			#5 Discussion
In Depth Topic - Neptune, MINT, 3duF and Microfluidic Primitives			
Company Presentation - TBD	**HW3 - Experimental Automation**		
In Depth Topic - Models of Computation			
In Depth Topic - Developmental Synthetic Biology			#6 Discussion
In Depth Topic - Automation / CRISPR-Cas9 genome editing	**HW2 Due**		
Company Presentation - TBD			
Project Presentations - Day 1		**Project due**	
Project Presentations - Day 2			
Project Post Mortem	**HW3 Due**		