

The Invention Process: Invention in the Context of Innovation

Program Schedule:

Day/Date	Time	Topic	Teacher
Monday July 30	8:45-10:00	Discussion of “the Chip”. Key points about Patents/Intellectual Property	Sachs
	10-10:30	Coffee Break	
	10:30-12	Model of invention/engineering as iterative looping of Synthesis and Analysis. Lessons from cognitive psychology: drawing on the right side of the brain (Edwards). Blink (Gladwell) , Thinking Fast and Slow (Khaneman) and others	Sachs
	12-1:15	Lunch (provided)	
	1:15-2:45	TRIZ part a - Expressing an inventive opportunity in the language of contradiction. Relation to interactions, coupling. The language of effects. Group exercises. Intro 40 principles.	Sachs
	2:45-3:15	Coffee Break	
	3:15-4:45	Morphological Analysis and brainstorming	Sachs
	Evening	Apply TRIZ part a to an inventive opportunity either from the news, your own experience, or from your work/life.	

Tuesday July 31	8:15-9:45	TRIZ part b – The 40 principles. The language of effects. Group exercises.	Sachs
	9:45-10:15	Coffee Break	
	10:15-11:45	Invent	Sachs
	11:45-1:00	Lunch (provided)	
	1:00-2:30	“Yes and...” Group exercises leading to Invention Improv (Applying the ideas of Improvisational Comedy to Invention).	Erik Volkert
	2:30-2:50	Coffee Break	
	2:50-4:00	Invention Improv.	Volkert
	4:00-5:00	Robustness	Sachs
	6:00-8:00	Group Dinner Legal Seafood 335 Main St Cambridge	

Wednesday Aug 1	8:15-10:00	Estimation (zero-order/first-order analysis)	Sachs
	10:00-10:30	Coffee Break	
	10:30-11:45	Invent	Sachs
	11:45-1:00	Lunch (provided)	
	1:00-2:30	TRIZ part c - Hierarchies of invention Evolution of Technical Systems	Sachs
	2:30-3:00	Coffee Break	
	3:00-4:00	Rate limits and ‘impedance matching’	Sachs
	4:00-5:00	Prototyping strategy	Sachs
	Evening	Invent	

Thursday Aug 2	8:15-9:45	Invent	Sachs
	9:45-10:15	Coffee Break	
	10:15-11:45	Patents part a – Structure of a patent, how to read claims, group exercise.	Sachs
	11:45-1:00	Lunch (provided)	
	1:00-2:30	Patents part b – Requirements; Legal and enforcement. Exercises drafting claims.	Sachs
	2:30-3:00	Coffee Break	
	3:00-4:00	Critique. Small groups.	Sachs
	4:00-5:00	Cycle Back to Invent	Sachs
	Evening	Apply first-order analysis and governance rules to proposals chosen from list. (45-60 minutes)	

Friday Aug 3	8:15-9:45	The place of Invention within Innovation, Planning R&D, Predicting technology trends.	Sachs
	9:45-10:15	Coffee Break	
	10:15-11:45	Pitching your ideas.	Sachs
		End of Class	