

# A short course in Systems Biology

2021 Systems Biology – Foundations “mini” Short Course  
August 2<sup>nd</sup> – 13<sup>th</sup>, 2021  
UCI Center for Complex Biological Systems

		Math/Comp	Bio
Monday, 8/2	9:00 – 9:45	Introduction by the course directors Arthur Lander, MD, PhD and German Enciso, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	
	10:00 – 11:00	Introduction to Systems Biology Arthur Lander, MD, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	
	11:30 – 12:30	“DevOps” for Systems Biology and intro to git Jun Allard, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	Molecular Biology Rahul Warrior, PhD ( <a href="#">Zoom 2</a> ; <a href="#">Slido 2</a> )
Tuesday, 8/3	9:00 – 10:00	Dynamical Systems German Enciso, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	Genetics Rahul Warrior, PhD ( <a href="#">Zoom 2</a> ; <a href="#">Slido 2</a> )
	10:15 – 11:15	Mathematica Tutorial Arthur Lander, MD, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	Developmental Biology Ken Cho, PhD ( <a href="#">Zoom 2</a> ; <a href="#">Slido 2</a> )
	11:30 – 12:30	Math modeling & PDEs John Lowengrub, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	Cell Biology Lee Bardwell, PhD ( <a href="#">Zoom 2</a> ; <a href="#">Slido 2</a> )
Wednesday, 8/4	9:00 – 10:00	Interdisciplinary research panel ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	
	10:15 – 11:15		
	11:30 – 1:30	Q&A social; Mentoring Session 1 (by appointment only) ( <a href="#">Gather.town</a> )	
Thursday, 8/5	9:00 – 10:00	Control of Cell Growth Arthur Lander, MD, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	
	10:15 – 11:15	Functional genomics Ali Mortazavi, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	
	11:30 – 12:30	Bioinformatics for mathematicians Jenny Wu, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )	Bioinformatics for biologists Trina Norden-Krichmar, PhD ( <a href="#">Zoom 2</a> ; <a href="#">Slido 2</a> )

Friday, 8/6	9:00 – 10:00	Big Data Steve Altschuler, PhD Professor, Department of Pharmaceutical Chemistry University of California, San Francisco ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	10:15 – 11:15	Principles of Evolution JJ Emerson, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	11:30 – 1:30	Q&A social; Mentoring Session 2 (by appointment only) ( <a href="#">Gather.town</a> )

Monday, 8/9	9:00 – 10:00	Machine Learning & AI Xiaohui Xie, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	10:15 – 11:15	Career skills: job-hunting, grant-writing, paper-writing ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	11:30 – 12:30	Career Panel ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
Tuesday, 8/10	9:00 – 10:00	scRNAseq Fundamentals Kai Kessenbrock, PhD ( <a href="#">Zoom 3</a> ; <a href="#">Slido 3</a> )
	10:15 – 11:15	scRNAseq in breast cancer metastasis Devon Lawson, PhD ( <a href="#">Zoom 3</a> ; <a href="#">Slido 3</a> )
	11:30 – 12:30	scRNAseq analyses Qing Nie, PhD ( <a href="#">Zoom 3</a> ; <a href="#">Slido 3</a> )
Wednesday, 8/11	9:00 – 10:00	Systems Genetics Marcus Seldin, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	10:15 – 11:15	Q&A social; Mentoring Session 3 (by appointment only) ( <a href="#">Gather.town</a> )
	11:30 – 12:30	Synthetic Biology Chang Liu, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
Thursday, 8/12	9:00 – 10:00	Zebrafish airinemes: an example of collaborative research in developmental biology, biophysics, and mathematical biology Jun Allard, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	10:15 – 11:15	Interpreting GWAS results using functional genomics data Jing Zhang, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	11:30 – 12:30	Biophysics of microbiomes Albert Siryaporn, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
Friday, 8/13	9:00 – 10:00	Systems neuroscience Kevin Beier, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )

	10:15 – 11:15	Single molecule approaches Fangyuan Ding, PhD ( <a href="#">Zoom 1</a> ; <a href="#">Slido 1</a> )
	11:30 – 12:30	Closing remarks; exit survey ( <a href="#">Gather.town</a> )

### Zoom 1:

<https://uci.zoom.us/j/93288653647?pwd=dmNxOHFIK1pyaFRzR1RRY2w2amJjZz09>

Meeting ID: 932 8865 3647

Passcode: 290779

Slido 1: 768704

### Zoom 2:

<https://uci.zoom.us/j/99756996913?pwd=UTJDOFlxeGVFYWtzU3ROMU9TK3Zwdz09>

Meeting ID: 997 5699 6913

Passcode: 528177

Slido 2: 328667

### Zoom 3:

<https://uci.zoom.us/j/91256708927?pwd=QTcrTWwzdU5ZUHFOc2JaSlq2dGRqQT09>

Meeting ID: 912 5670 8927

Passcode: 476714

Slido 3: 118136

### Gather.town:

<https://gather.town/invite?token=2OB8V6Ue>

### Slack workspace

2021systemsbi-al45000.slack.com

