

Day	Date	Session	Time slot (ET)	Type	Lecturer	Topic
1	Monday, March 14, 2022	Morning	9:00-9:30	Registration	SEMC staff	Check-in and coffee
1	Monday, March 14, 2022	Morning	9:30 - 10:45	Lecture 1 - Keynote	Joachim Frank (Columbia University)	Keynote - Intro and overview of SPA
1	Monday, March 14, 2022	Morning	11:15 - 12:00	Roundtable 1	<i>students</i>	Flashtalks from students
1	Monday, March 14, 2022	Lunch	12:00 - 13:00	Lunch	instructors, students and TAs	Lunch
1	Monday, March 14, 2022	Afternoon	13:00 - 14:00	Lecture 2	Victor Chen & Wen Jian (Purdue University)	cryoVR for Virtual Reality Augmented CryoEM Training
1	Monday, March 14, 2022	Afternoon	14:00 - 17:30	Practical 1	SEMC staff	cryoEM sample prep and grid prep stations
1	Monday, March 14, 2022	Reception	17:00 - 18:30	Reception	instructors, students and TAs	Reception
2	Tuesday, March 15, 2022	Morning	9:00 - 10:00	Lecture 3	SEMC staff	Microscopes, grids and tools of the trade
2	Tuesday, March 15, 2022	Morning	10:00 - 10:30	Roundtable 2	SEMC staff	Making use of local facilities and national centers
2	Tuesday, March 15, 2022	Afternoon	10:30 - 17:30	Practical 2	SEMC staff	Support films, plunge freezing and TEM stations
3	Wednesday, March 16, 2022	Morning	9:00 - 9:50	Lecture 4a	Fred Sigworth (Yale University)	Algorithms and foundational math PartI:derivation/explanation of the CTF, FTs.
3	Wednesday, March 16, 2022	Morning	10:00 - 11:00	Lecture 4b	Fred Sigworth (Yale University)	Algorithms and foundational math PartII:reconstruction, classification, maximum likelihood.
3	Wednesday, March 16, 2022	Morning	11:15 - 12:00	Lecture 5	Amedee des Georges (ASRC/CUNY)	Data Analysis and reconstruction workflow
3	Wednesday, March 16, 2022	Lunch	12:00 - 13:00	Roundtable 3	Fred Sigworth & Amedee des Georges	Current and new algorithms to deal with SPA reconstruction
3	Wednesday, March 16, 2022	Afternoon	14:00 - 17:30	Practical 3	SEMC staff	Processing using cryoSPARC
4	Thursday, March 17, 2022	Morning	9:00 - 10:00	Lecture 6	Rich Hite (Memorial Sloan Kettering Cancer Center)	Interpretation and Limitations of SPA
4	Thursday, March 17, 2022	Morning	10:30 - 11:30	Lecture 7	Tom Walz (Rockefeller University)	Validation Methods
4	Thursday, March 17, 2022	Lunch	12:00 - 13:00	Roundtable 4	Rich Hite & Tom Walz	EM challenges and new frontiers
4	Thursday, March 17, 2022	Afternoon	14:00 - 16:00	Practical 4	SEMC staff	Autoloader TEMs and Krios data collection at a national center
4	Thursday, March 17, 2022	Afternoon	16:00 - 16:45	Lecture 8	Cathy Lawson (Rutgers University)	EMDataResource: Structure Data Archiving, Validation Challenges
4	Thursday, March 17, 2022	Dinner	18:00 - 20:00	Dinner	all instructors, students and TAs	Group dinner
5	Friday, March 18, 2022	Morning	9:00 - 9:45	Lecture 9	Oli Clarke (Columbia University)	Fitting Atomic Models
5	Friday, March 18, 2022	Morning	10:00 - 10:45	Lecture 10	Gira Bhabha & Damian Ekiert (New York University)	Coordinate Refinement and Validation
5	Friday, March 18, 2022	Morning	10:45 - 11:30	Roundtable 5	Oli Clarke, Gira Bhabha and Damian Ekiert	Making biological conclusions from cryoEM reconstructions.
5	Friday, March 18, 2022	Lunch	11:45 -	Lunch	instructors, students and TAs	Lunch concurrent with Coot practical
5	Friday, March 18, 2022	Afternoon	12:00 - 16:00	Practical 5	Oli Clarke	Coot and model building
5	Friday, March 18, 2022	Afternoon	16:00 - 16:30	Wrap up and checkout	SEMC staff	Farewell