

BIOCHEMISTRY BOOT CAMP

Location TBD

June 10 - 12

TENTATIVE PROGRAM OF EVENTS (Last Update: 4/15/2019)

All events are scheduled to take place in (*Location TBD*) unless otherwise noted. For updates and more information, please visit <https://fitzkee.chemistry.msstate.edu/bootcamp/>.

Monday, June 10

- 8:00 am “No-Frills” Breakfast
Bagels, doughnuts, coffee, and juice
- 9:00 am Introductory Remarks Nick Fitzkee
- 9:05 am **Session 1:** Protein Structure TBD
Primary, secondary, tertiary structure; origins of function
- 10:20 am Break
- 10:30 am **Session 2:** Protein Properties and Online-Databases TBD
Computer tools for understanding proteins; ExPASy, Entrez
- 11:50 am Group Photo
- 12:00 pm Break for Lunch (on your own)
- 1:30 pm **Session 3:** Introduction to UNIX TBD
Filesystem, running programs, X-windows, working with files
- 2:50 pm Break
- 3:00 pm **Session 4:** Model Fitting and GnuPlot TBD
Model basics, uncertainties and errors, chi-squared
- 4:30 pm Discussion and Day 1 Wrap-Up Participants
Take Home Lab: GNUPlot for Chemists
- 5:00 pm Break for Dinner (on your own)

Tuesday, June 11

Session 5: Working in the Lab: Laboratory Safety and Waste Handling at MSU

9:00 am	Laboratory Safety	Matt Thomas, EHS
10:30 am	Break	
10:40 am	Chemical Waste Disposal at MSU	Ben Sharpe, EHS
11:00 am	Session 6: Publication-Quality Graphics Excel Tricks, Learning the GIMP and InkScape	TBD
11:50 am	Break for Lunch (on your own)	
1:00 pm	Session 7: DNA Structure and Properties Basic properties, PCR, predicting melting temperatures	TBD
2:20 pm	Break	
2:30 pm	Session 8: The PDB and Molecular Visualization Using PyMOL for analysis and figures	TBD
3:50 pm	Break	
4:00 pm	Session 9: Keeping a Lab Notebook	TBD
4:50 pm	Discussion and Day 2 Wrap-Up Take Home Lab: Practice Using PyMOL	Participants
5:00 pm	Break for Dinner (on your own)	

Wednesday, June 12

9:00 am	Session 10: Basic Bioinformatics Homology, sequence alignment, and BLAST	TBD
10:20 am	Break	
10:30 am	Session 11: Literature Databases and EndNote Constructing a library, Getting a perfect bibliography	TBD
11:50 am	Survey and Day 3 Wrap-Up	Participants
12:00 pm	Depart	