

BIOCHEMISTRY BOOT CAMP

Hand Lab, Room 1144

May 22 - 24

PROGRAM OF EVENTS

All events are scheduled to take place in **Hand Lab Room 1144** (first floor, *not the ground floor*) unless otherwise noted. Please note this room is different from originally planned. For updates and more information, please visit <http://fitzkee.chemistry.msstate.edu/bootcamp/>.

Monday, May 22

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| 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
Primary, secondary, tertiary structure; origins of function | Nick Fitzkee |
| 10:20 am | Break | |
| 10:30 am | Session 2: Protein Properties and Online-Databases
ExPASy, Entrez | Nick Fitzkee |
| 11:50 am | Group Photo | |
| 12:00 pm | Break for Lunch (on your own) | |
| 1:30 pm | Session 3: Introduction to UNIX
Filesystem, running programs, X-windows, working with text files | Yue Zhang |
| 2:50 pm | Break | |
| 3:00 pm | Session 4: Using GNUPlot for Model Fitting
Model basics, uncertainties and errors, chi-squared | Nick Fitzkee |
| 4:30 pm | Discussion and Day 1 Wrap-Up
Take Home Lab: GNUPlot for Chemists | Participants |
| 5:00 pm | Break for Dinner (on your own) | |

Tuesday, May 23

Session 5: Working in the Lab: Laboratory Safety, Waste, and Techniques

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	Demo: Using a Micropipette	Nick Fitzkee
11:30 am	Break for Lunch (on your own)	
1:00 pm	Session 6: DNA Structure and Properties Basic properties, predicting melting temperatures	Nick Fitzkee
2:20 pm	Break	
2:30 pm	Session 7: The PDB and Molecular Visualization Using PyMOL for analysis and figures	Nick Fitzkee
3:30 pm	Session 8: Keeping a Lab Notebook	Nick Fitzkee
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, May 24

9:00 am	Session 9: Basic Bioinformatics Homology, sequence alignment, and BLAST	Nick Fitzkee
10:20 am	Break	
10:30 am	Session 10: Literature Databases and EndNote	Randy Perera
11:50 am	Survey and Day 3 Wrap-Up	Participants
12:00 pm	Depart	