**BIOCHEMISTRY BOOT CAMP**
Swalm Chemical Engineering Building, Room 100
May 22 - 24

PROGRAM OF EVENTS

All events are scheduled to take place in ***Swalm 100*** (first floor) unless otherwise noted. 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<br>Bagels, doughnuts, coffee, and juice | |
| 9:00 am | Introductory Remarks | Nick Fitzkee |
| 9:05 am | **Session 1:** Protein Structure<br>Primary, secondary, tertiary structure; origins of function | TBD |
| 10:20 am | Break | |
| 10:30 am | **Session 2:** Protein Properties and Online-Databases<br>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<br>Filesystem, running programs, X-windows, working with text files | TBD |
| 2:50 pm | Break | |
| 3:00 pm | **Session 4:** Using GNUPlot for Model Fitting<br>Model basics, uncertainties and errors, chi-squared | Nick Fitzkee |
| 4:30 pm | Discussion and Day 1 Wrap-Up<br>**Take Home Lab:** GNUPlot for Chemists | Participants |
| 5:00 pm | Break for Dinner (on your own) | |

*Tuesday, May 23*

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

*Wednesday, May 24*

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| 9:00 am | **Session 9:** Basic Bioinformatics<br>Homology, sequence alignment, and BLAST | Nick Fitzkee |
| 10:20 am | Break | |
| 10:30 am | **Session 10:** Literature Databases and EndNote | TBD |
| 11:50 am | Discussion and Day 3 Wrap-Up | Participants |
| 12:00 pm | Depart | |