TUNL Summer 2013 Lectures & Tutorials

Thursday May 30st – 9 AM – 3:30 PM (LSRC Room A247)

All Required: *Safety Training* – Chris Westerfeldt

Friday May 31st – 9 AM

REU Required: TUNL, LENA & FEL *Tour* – (Meet in TUNL Lobby)

Monday June 10th – 10 AM – 11:30 AM (DFELL Conference Room, 117)

REU Required: *Building Blocks of Nuclei* – Mohammad Ahmed

Monday June 10th – 2 PM – 3:30 PM (DFELL Conference Room, 117)

REU Required: *N-N Interactions and Local Accelerators* – Mohammad Ahmed

Wednesday June 12th – 10:00 AM – 11:30 AM (DFELL Conference Room, 117)

REU Required: *Nuclear Instrumentation* – Mohammad Ahmed

Wednesday June 12th – 2:00 PM – 3:30 PM (TUNL Reading Room, 405)

REU Required: *Cross Sections and Scattering* – Calvin Howell

Thursday June 13th – 10 AM – 11:30 AM (DFELL Conference Room, 117)

REU Optional: *Introduction to ROOT* – Mohammad Ahmed

Cint, Cint Environment (namespaces), I/O in Cint, Variables in ROOT, Scripts, Functions, Compiled functions

Thursday June 13th – 2 PM – 3:30 PM (DFELL Conference Room, 117)

REU Optional: *ROOT Classes and Member Functions* – HEP Group Presents

Pointers in ROOT and Memory Management, TCanvas Class, TGraph Classes, TF1 Classes, Histogram Classes, Random Numbers, TMatrix, TFile class for I/O

Friday June 14th – 10 AM – 11:30 AM (DFELL Conference Room, 117)

REU Optional: *Data Structure/Management/Analysis* – Mark Sikora

ROOT Trees (ntuples, creating trees and reading trees), 1d-Cuts and Graphical Cuts (Create, Save, and Use), Using Arrays in ROOT, Histogram Operations (Cuts, Fitting, Integral, Contents), TPhysics (Lorentz Transforms, etc), TMath (Special Functions)

Monday June 17th – 2 PM – 3:30 PM (DFELL Conference Room, 117)

REU Optional: *GUIs in ROOT* – Bill Zimmerman

TPad, TText, TLatex, TLine, TButton, TImage, TGTextEntry, gSystem

Tuesday June 18th – 10 AM – 11:30 AM (DFELL Conference Room, 117)

REU Optional: *OOP in ROOT* – Jonathan Mueller

Writing your own Classes, Using inheritances to construct class hierarchies, Compiling a shared object library of classes, Creating a stand-alone ROOT application, Using shell scripts and makefiles to compile ROOT applications

Wednesday June 19th – 10:00 AM – 11:30 PM (DFELL Conference Room, 117)

REU Optional: *Numerical Techniques and Problem Solving: Examples in ROOT* – Mohammad Ahmed

Euler-Cromer Method, Lorenz Model and Dissipative, non-linear, driven pendulum, Relaxation and Diffusion, the case of parallel plates, The wave equation, reflection and transmission, The shooting method and potential well/harmonic oscillator, Montecarlo methods, the Ising Model and phase transitions

Thursday June 20th – 3:30 PM – 4:30 PM (DFELL Conference Room, 117)

REU Optional: *Introduction to Latex* – Alex Crowell

Thursday June 27th – 10:00 AM – 11:30 AM (DFELL Conference Room, 117)

Grads/Post-Docs Required: *Scientific Writing: It's not about you* – Connie Kalbach Walker

Thursday June 27th – 3:30 PM – 5:00 PM (DFELL Conference Room, 117)

Grads/Post-Docs Required: *Scientific Writing: Making it clear and easy* – Connie Kalbach Walker