Objectives

Welcome!

• This class is designed to be an introduction to using a computer to solve problems in the physical sciences
• Two parts:
  – **Introduction to computer programming:**
    • Using Linux
    • Using editors, managing files
    • C programming and compiling basics (and some C++)
    • Programming style and techniques
    • Debugging and optimization
  – **Using computer programs to solve problems:**
    • Numerical methods (differentiation, integration, root-finding, etc.)
    • Visualization of data
    • Monte Carlo modeling and other simulations of physical processes
    • Fitting models to data
    • Error analysis and hypothesis testing
Welcome

• My name is Prof. Chris Neu
  – offices: HEP room 119, Physics room 302
  – office hours:
    Tuesdays 3:15-4:30pm in Physics 022C
  – email: chris.neu@virginia.edu
  – google: cneu34
  – twitter: @NeuPhysics
  – NB: the best way to contact me is via email

• TAs:
  – Gage DeZoort: jgd5ur@virginia.edu
  – Andrew Orvedahl: ajo2eq@virginia.edu
    • will be present for lab sections
    • will hold additional lab hours
    • your primary resource for questions on HW, grading, etc.
Most Important Resource for this Class

Class Meetings and Homework

• Lecture: Tuesdays 14:00 in Phys 204
• Labs: register for one section, held in Phys 022-C
  – Sect 101: Thursday 12:30 - 14:00 ***full***
  – Sect 102: Thursday 14:15 – 15:45 ***full***
  – Sect 103: Thursday 16:00 – 17:30
• My office hours: Tuesdays immediately after lecture, 3:30-4:30pm in Phys 022-C
• Extra lab times in Phys 022-C
  – Mondays 3-8pm
  – Wednesdays 5-9pm
• Homework:
  – Assigned on Thursdays after all labs
  – Due to following week Thursday
  – Electronic submission – strict time deadline, noon every Thurs
  – Paper copy occasionally needed as well, turn in at lab meeting if required

No office hours this week!
Good Practices

• Anyone can succeed in this class

• Recipe:
  – Prepare for lecture: read the recommended sections in advance
  – Attend lecture and pay attention
  – Attend labs and participate
  – Work on the homeworks thoughtfully and diligently
  – Work on the homeworks early
  – Afford enough time to complete a homework – time for thinking about the problem and time for executing the solution
  – Ask questions
  – Do not be afraid to make mistakes – try things, break things, fix things, learn.
  – When you make mistakes, learn from them
We’ll pick up from here next time.

Regular lectures start Tuesday!
See you then.