

# NUPAC CSU IRES 2022 Tentative Schedule

## Part I – Computing in HEP

- Week 1 (Jan 24, 26): HEP Computing Basics
- Week 2 (Feb 1, 3): Version Control and Modern SW Engineering Tools
- Week 3 (Feb 8, 10): Introduction to Object Oriented Programming

## Part II – LHC Physics

- Week 4 (Feb 15, 17): LHC and Physics of Hadron Colliders
- Week 5 (Feb 22, 24): The ATLAS and CMS Detectors
- Week 6 (Mar 1, 3): Standard Model – The Good, The Bad, and the Ugly

## Part III – Analysis Techniques at the LHC

- Week 7 (Mar 8, 10): Digesting HEP Literature
- Week 8 (Mar 15, 17): Anatomy of HEP-ex Analysis
- Week 9 (Mar 22, 24): Physics Objects in HEP-ex
- Week 10 (Mar 29): Athena/CMSSW
- Week 11 (Apr 5, 7): Advanced Optimization – Machine Learning for HEP
- Week 12: Spring Break

## Part IV – Applying Your Knowledge

- Week 13 (Apr 19, 21): Kickstarting Your Summer Research
- Week 14 (Apr 26, 28): Kickstarting Your Summer Research
- Week 15 (May 3, 5): Open Data Toy Analysis, ATLAS/CMS
- Week 16 (May 10): Presentation