Textbooks Recommended for Purchase
- Leo, “Techniques for Nuclear and Particle Physics Experiments”,
- Bevington, “Data Reduction and Error Analysis for the Physical Sciences”, or

Texts Used in Class & Required Reading
Lectures are based on chapters and parts from the following textbooks and articles. Some material will be made available through the library course reserve pages.

Interaction of Radiation with Matter
- Leo, “Techniques for Nuclear and Particle Physics Experiments”
- Tavernier “Experimental Techniques in Nuclear and Particle Physics”
- Longair, “High Energy Astrophysics: Volume 1, Particles, Photons and their Detection”
- Particle Data Group, Review Articles, http://pdg.lbl.gov/

Particle Detectors
- Leo, “Techniques for Nuclear and Particle Physics Experiments”
- Knoll, “Radiation Detection and Measurement”
- Longair, “High Energy Astrophysics: Volume 1, Particles, Photons and their Detection”
- Fraser, “X-ray detectors in astronomy”
- Enss, “Cryogenic Particle Detection”
- Particle Data Group, Review Articles, http://pdg.lbl.gov/
- Meeks and Siegel, “Dead time correction via the time series”, http://dx.doi.org/10.1119/1.2870432

Statistics
- Bevington, “Data Reduction and Error Analysis for the Physical Sciences”
- James, “Statistical Methods in Experimental Physics”
- Particle Data Group, Review Articles, http://pdg.lbl.gov/
Numerical Methods
- Hornbeck, “Numerical Methods”
- Bevington, “Data Reduction and Error Analysis for the Physical Sciences”
- Particle Data Group, Review Articles, http://pdg.lbl.gov/

Analysis Techniques
- Klein and Roodman, “Blind Analysis in Nuclear and Particle Physics”,

Accelerator Techniques
- Henley, “Subatomic Physics”
- Particle Data Group, Review Articles, http://pdg.lbl.gov/

Additional Reference Books
The following texts are recommended as references:

Particle Detectors
- Bock and Vasilesci, “The Particle Detector BriefBook”
  http://physics.web.cern.ch/Physics/ParticleDetector/BriefBook/
- Green, “The Physics of Particle Detectors”
- Gruben, Schwartz, “Particle Detectors”
- Kleinknecht, “Detectors for Particle Radiation”
- Ferbel, "Experimental Techniques in High Energy Nuclear and Particle Physics"
- Pobell, “Matter and Methods at Low Temperatures”
- Enss, “Low Temperature Physics”
- White and Meeson, "Experimental Techniques in Low-Temperature Physics"
- Guglielmo Ventura, "The Art of Cryogenics: Low-Temperature Experimental Techniques"
- Rieke, “Detection of Light: from the UV to the Submillimeter”
- Perkins, “Introduction to High Energy Physics”

Statistics
- Bock and Kriesher, “The Data Analysis BriefBook”
  http://rkb.home.cern.ch/rkb/titleA.html
- Lyons, “A Practical Guide to Data Analysis for Physical Science Students”

Analysis Techniques
- Bock and Kriesher, “The Data Analysis BriefBook”
  http://rkb.home.cern.ch/rkb/titleA.html
Useful Free Online Resources
- Particle Data Group, Review Articles, http://pdg.lbl.gov/
- Bock and Vasilesoci, “The Particle Detector BriefBook” http://physics.web.cern.ch/Physics/ParticleDetector/BriefBook/