References and Links

Useful Reference Books

Bracewell, R. 2000, *The Fourier Transform and Its Applications* (McGraw-Hill: New York)
The classic text on Fourier transforms.

Burke, B. F., & Graham-Smith, F. 1997, *An Introduction to Radio Astronomy* (Cambridge University Press: Cambridge)
A very readable descriptive introduction to radio astronomy. The text and equations are accurate, but most of the results are only stated, not derived. An updated second edition appeared in 2002.

Christiansen, W. N., & Högbom, J. A. 1985, *Radio Telescopes* (Cambridge University Press: Cambridge)
Principles of design for a wide range of radio telescopes.

Goldsmith, P. F. (ed) 1988, *Instrumentation and Techniques for Radio Astronomy* (IEEE Press: New York)
Reprints of classic papers.

Jackson, J. D. 1962, *Classical Electrodynamics* (Wiley: New York)
The standard textbook for electromagnetism, with an appendix explaining systems of units.

Kraus, J. D. 1986, *Radio Astronomy* (Cygnus-Quasar Books: Powell, OH)
Revised edition of the classic but idiosyncratic general text, with an emphasis on radio telescope antennas and receivers.

Longair, M. S. 1992, *High Energy Astrophysics* (2nd ed) (Cambridge University Press: Cambridge)
This two-volume graduate-level text contains physically insightful derivations of the Larmor equation and formulae for free-free emission, synchrotron radiation, and inverse-Compton scattering.

Lorimer, D. L., & Kramer, M. 2005, *Handbook of Pulsar Astronomy,* (Cambridge University Press: Cambridge)
Up-to-date review of observational techniques and results of pulsar observations.

Lyne, A. G., & Graham-Smith, F. 1998, *Pulsar Astronomy* (2nd ed) (Cambridge University Press: Cambridge)
A very readable book covering most of pulsar astronomy.

Osterbrock, D. E. 1989, *Astrophysics of Gaseous Nebulae and Active Galactic Nuclei* (2nd ed) (University Science Books: Mill Valley, CA)
The classic text covering free-free continuum and hydrogen recombination lines at the advanced graduate level.

Pachholczyk, A. B. 1970, *Radio Astrophysics* (Freeman: San Francisco)
Mathematically complete derivations of formulae for free-free emission, synchrotron radiation, and inverse-Compton radiation.

Rohlfs, K., & Wilson, T. L. 2006, *Tools of Radio Astronomy* (Springer: Berlin)
The only complete radio-astronomy textbook in print, the latest version is by Wilson, Rohlfs, & Hüttemeister

Rybicki, G. B., & Lightman, A. P. 1979, *Radiative Processes in Astrophysics* (Wiley: New York)
A very good textbook on radiation fundamentals and astrophysical emission mechanisms.

Stanimirovic, S., Altschuler, D.R., Goldsmith, P. F., & Salter, C. J. (eds) 2002, *Single-Dish Radio Astronomy: Techniques and Applications* (ASP: San Francisco)
Everything you wanted to know about single-dish observering, from the 2001 Arecibo summer school.

Taylor, G. B., Carilli, C. L., & Perley, R. A. (eds) 1999, *Synthesis Imaging in Radio Astronomy II* (ASP: San Francisco)
Everything you wanted to know about interferometry, but were afraid to ask, from the 1998 VLA synthesis-imaging summer school.

Thompson, A. R., Moran, J. M., & Swenson, G. W. 1986, *Interferometry and Aperture Synthesis in Radio Astronomy* (Wiley: New York)
Classic text on radio interferometry; revised edition recently appeared.

Wilson, T. L., Rohlfs, K., & Hüttemeister, S. 2009, *Tools of Radio Astronomy (*5th ed) (Springer: Berlin)
Successor to Rohlfs & Wilson *Tools of Radio Astronomy*

Links

http://adsabs.harvard.edu/
The Astrophysical Data System (ADS) searches the astronomy/astrophysics literature by subject, author, etc.

http://xxx.lanl.gov/archive/astro-ph
Astro-ph provides astronomy preprints before they are published. You can keep up with the latest results, but *caveat emptor* as they have not all been refereed.

http://nedwww.ipac.caltech.edu
The NASA/IPAC Extragalactic Database. NED is built around a master list of extragalactic objects for which cross-identifications of names have been established, accurate positions and redshifts entered to the extent possible, and some basic data collected. Bibliographic references relevant to individual objects have been compiled, and abstracts of extragalactic interest are kept on line. Detailed and referenced photometry, position, and redshift data, have been taken from large compilations and from the literature.

http://simbad.harvard.edu
SIMBAD stands for Set of
Identifications, Measurements, and Bibliography for Astronomical Data. It contains data, cross-identifications, observational measurements, and bibliography, for celestial objects outside the solar system: stars, galaxies, and nonstellar objects within our galaxy, or in external galaxies.

http://cdsweb.u-strasbg.fr/Cats.html
The Strasbourg astronomical Data Center (CDS) collects and distributes astronomical data catalogues, related to observations of stars and galaxies, and other galactic and extragalactic objects.

http://www.cv.nrao.edu/nvss/
The NRAO VLA Sky Survey (NVSS). This "virtual radio observatory'' site provides radio continuum views of the sky visible from the northern hemisphere, including a catalog of 1.8×10^6 sources stronger than 2.5 mJy at 1.4 GHz and postage-stamp images with $45''$ resolution.

http://www.nrao.edu/
The NRAO home page. This site describes the NRAO telescopes, how to propose for observing time, schedule observations, reduce data, etc.

http://www.cv.nrao.edu/fits/www/astronomy.html
Links to most everything astronomical on the web.