



# Think Like a Scientific Disciplinarian

An academic disciplinarian is an expert in a particular field of study. Academic disciplines are branches of learning or scholarly instruction in which degrees may be earned at the college or university level. Disciplinarians teach, conduct research and publish their findings in peer-reviewed scholarly journals. They may also be experts in an applied field, where they use their expertise to perform specialized tasks rather than conduct basic research. Many disciplinarians have expertise and collaborate with others in different disciplines. Fields of study usually have several sub-disciplines or branches as seen below.

## **Chemistry**

- Analytical chemistry
- Atmospheric chemistry
- Biochemistry
- Computational chemistry
- Electrochemistry
- Environmental Chemistry
- Geochemistry
- Inorganic chemistry
- Materials science
- Medicinal chemistry
- Neurochemistry
- Nuclear Chemistry
- Organic chemistry
- Polymer chemistry
- Physical chemistry
- Quantum chemistry
- Spectroscopy
- Stereochemistry
- Thermochemistry
- Thermodynamics

## **Astronomy**

- Archaeoastronomy
- Astrobiology
- Astrochemistry
- Astrodynamics
- Astrometry
- Astrophysics
- Cosmochemistry
- Cosmology
- Extragalactic astronomy
- Galactic astronomy
- Physical cosmology
- Planetary geology
- Planetary science
- Solar astronomy
- Stellar astronomy

## **Physics**

- Acoustics
- Agrophysics
- Astrophysics
  - Cosmology
  - Gravitational physics
  - Space physics
- Atomic, Molecular, and Optical physics
- Biophysics
- Computational physics
- Condensed matter physics
- Cryogenics
- Dynamics
- Electromagnetism
  - Electrostatics
  - Electrodynamics
- Electronics
- Fluid dynamics
- Geophysics
- Materials physics
- Mathematical physics
- Mechanics
- Medical physics
- Molecular physics
- Nuclear physics
- Optics
- Particle/High Energy physics
  - Accelerator physics
  - Nuclear astrophysics
  - Particle astrophysics
- Plasma physics
- Polymer physics
- Quantum Physics
- Statics
- Solid State
- Thermodynamics
- Vehicle dynamics
- Relativistic Physics

## **Earth sciences**

- Atmospheric sciences
- Biogeography
- Cartography
- Climatology
- Coastal geography
- Geodesy
- Geography
- Geology
- Geomorphology
- Geostatistics
- Geophysics
- Glaciology
- Hydrology
- Hydrogeology
- Mineralogy
- Meteorology
- Oceanography
- Paleoclimatology
- Paleontology
  - Micropaleontology
  - Paleobiology
  - Palynology
- Petrology
- Seismology
- Soil science
  - Edaphology
  - pedology
- Topography
- Volcanology

## **Environmental sciences**

- Ecology
  - Freshwater biology
  - Marine biology
  - Parasitology
- Environmental chemistry
- Environmental geology
- Environmental hydrology
- Environmental soil science
- Limnology
- Population dynamics
- Toxicology

## **Engineering**

- Aeronautical engineering
- Aerospace engineering
- Agricultural engineering
- Agricultural science
- Biomedical engineering
- Chemical engineering
- Civil engineering
- Computer engineering
- Control engineering
- Electrical engineering
- Industrial engineering
- Language engineering
- Marine engineering
- Mechanical engineering
- Mining engineering
- Nuclear engineering
- Polymer engineering
- Software engineering
- Systems engineering

## **Life Sciences / Biology**

- Anatomy / Morphology
- Astrobiology
- Biochemistry
- Bioinformatics
- Biophysics
- Botany
  - Bryology
  - Mycology
    - Lichenology
  - Palynology
  - Phycology (Algology)
- Cell biology / Cytology
- Chronobiology
- Developmental biology
  - Embryology
  - Gerontology
- Epidemiology
- Evolution/Evolutionary biology
  - Evolutionary developmental biology
- Genetics
  - Genomics
  - Proteomics
- Population genetics
- Microbiology/ Bacteriology
- Molecular Biology
  - Structural biology
- Physiology
  - Immunology
  - Kinesiology
  - Neuroscience
  - Histology
- Systematics
  - Cladistics
  - Phylogeny
  - Taxonomy
- Virology
- Zoology
  - Arachnology
    - Acarology
  - Entomology
    - Myrmecology
  - Ethology
  - Helminthology
  - Herpetology
  - Ichthyology
  - Malacology
  - Mammology
    - Cetology
  - Physical anthropology
  - Nematology
  - Ornithology
    - Oology

## **Health sciences**

- Conservation medicine
- Dentistry
- Optometry
- Medicine
  - Anatomy
  - Dermatology
  - Gynecology
  - Immunology
  - Internal medicine
  - Neurology
  - Ophthalmology
  - Pathology
  - Pathophysiology
  - Pediatrics
  - Pharmacology
  - Physiology
  - Psychiatry
  - Radiology
  - Toxicology
  - Urology
- Nutrition
- Nursing
- Physical therapy
- Veterinary medicine