**Branches of biology**

These are the main branches of biology:

- **Aerobiology** — the study of airborne organic particles
- **Agriculture** — the study of producing crops from the land, with an emphasis on practical applications
- **Anatomy** — the study of form and function, in plants, animals, and other organisms, or specifically in humans
- **Astrobiology** — the study of evolution, distribution, and future of life in the universe. Also known as exobiology, exopaleontology, and bioastronomy
- **Biochemistry** — the study of the chemical reactions required for life to exist and function, usually a focus on the cellular level
- **Bioengineering** — the study of biology through the means of engineering with an emphasis on applied knowledge and especially related to biotechnology
- **Bioinformatics** — the use of information technology for the study, collection, and storage of genomic and other biological data
- **Biomathematics or Mathematical Biology** — the quantitative or mathematical study of biological processes, with an emphasis on modeling
- **Biomechanics** — often considered a branch of medicine, the study of the mechanics of living beings, with an emphasis on applied use through prosthetics or orthotics
- **Biomedical research** — the study of the human body in health and disease
- **Biophysics** — the study of biological processes through physics, by applying the theories and methods traditionally used in the physical sciences
- **Biotechnology** — a new and sometimes controversial branch of biology that studies the manipulation of living matter, including genetic modification and synthetic biology
- **Building biology** — the study of the indoor living environment
- **Botany** — the study of plants
- **Cell biology** — the study of the cell as a complete unit, and the molecular and chemical interactions that occur within a living cell
- Conservation Biology — the study of the preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife
- Cryobiology — the study of the effects of lower than normally preferred temperatures on living beings.
- Developmental biology — the study of the processes through which an organism forms, from zygote to full structure
- Ecology — the study of the interactions of living organisms with one another and with the non-living elements of their environment
- Embryology — the study of the development of embryo (from fecundation to birth). See also topobiology.
- Entomology — the study of insects
- Environmental Biology — the study of the natural world, as a whole or in a particular area, especially as affected by human activity
- Epidemiology — a major component of public health research, studying factors affecting the health of populations
- Ethology — the study of animal behavior
- Evolutionary Biology — the study of the origin and descent of species over time
- Genetics — the study of genes and heredity
- Herpetology — the study of reptiles and amphibians
- Histology — the study of cells and tissues, a microscopic branch of anatomy
- Ichthyology — the study of fish
- Integrative biology — the study of whole organisms
- Limnology — the study of inland waters
- Mammalogy — the study of mammals
- Marine Biology — the study of ocean ecosystems, plants, animals, and other living beings
- Microbiology — the study of microscopic organisms (microorganisms) and their interactions with other living things
- Molecular Biology — the study of biology and biological functions at the molecular level, some cross over with biochemistry
- Mycology — the study of fungi
- Neurobiology — the study of the nervous system, including anatomy, physiology and pathology
• Oceanography — the study of the ocean, including ocean life, environment, geography, weather, and other aspects influencing the ocean
• Oncology — the study of cancer processes, including virus or mutation oncogenesis, angiogenesis and tissues remoldings
• Ornithology — the study of birds
• Population biology — the study of groups of conspecific organisms, including
  o Population ecology — the study of how population dynamics and extinction
  o Population genetics — the study of changes in gene frequencies in populations of organisms
• Paleontology — the study of fossils and sometimes geographic evidence of prehistoric life
• Pathobiology or pathology — the study of diseases, and the causes, processes, nature, and development of disease
• Parasitology — the study of parasites and parasitism
• Pharmacology — the study and practical application of preparation, use, and effects of drugs and synthetic medicines
• Physiology — the study of the functioning of living organisms and the organs and parts of living organisms
• Phytopathology — the study of plant diseases (also called Plant Pathology)
• Psychobiology — the study of the biological bases of psychology
• Sociobiology — the study of the biological bases of sociology
• Structural biology — a branch of molecular biology, biochemistry, and biophysics concerned with the molecular structure of biological macromolecules
• Virology — the study of viruses and some other virus-like agents
• Zoology — the study of animals, including classification, physiology, development, and behavior.