

# Outline of academic disciplines

Main article: [Discipline \(academia\)](#)

An **academic discipline** or **field of study** is a branch of knowledge that is taught and researched as part of higher education. A scholar's discipline is commonly defined and received by the university faculties and learned societies to which he or she belongs and the academic journals in which he or she publishes research. However, no formal criteria exists for defining an academic discipline.

Disciplines vary between well-established ones that exist in almost all universities and have well-defined rosters of journals and conferences and nascent ones supported by only a few universities and publications. A discipline may have branches, and these are often called sub-disciplines.

There is no consensus on how some academic disciplines should be classified (e.g., whether anthropology and linguistics are discipline of social sciences or fields within the humanities). More generally, the proper criteria for organizing knowledge into disciplines are also open to debate.

The following outline is provided as an overview of and topical guide to academic disciplines.

## 1 Arts

Main article: [The arts](#)

### 1.1 Performing arts

Main articles: [Performing arts](#) and [Outline of performing arts](#)

- [Music \(outline\)](#)
  - [Accompanying](#)
  - [Chamber music](#)
  - [Church music](#)
  - [Conducting](#)
    - [Choral conducting](#)
    - [Orchestral conducting](#)
    - [Wind ensemble conducting](#)
  - [Early music](#)
  - [Jazz studies \(outline\)](#)

- [Musical composition](#)
- [Music education](#)
- [Music history](#)
- [Musicology](#)
  - [Historical musicology](#)
  - [Systematic musicology](#)
- [Ethnomusicology](#)
- [Music theory](#)
- [Orchestral studies](#)
- [Organology](#)
  - [Organ and historical keyboards](#)
  - [Piano](#)
  - [Strings, harp, oud, and guitar \(outline\)](#)
  - [Singing](#)
  - [Woodwinds, brass, and percussion](#)
- [Recording](#)
- [Dance \(outline\)](#)
  - [Choreography](#)
  - [Dance notation](#)
  - [Ethnochoreology](#)
  - [History of dance](#)
- [Television \(outline\)](#)
  - [Television studies](#)
- [Theatre \(outline\)](#)
  - [Acting](#)
  - [Directing](#)
  - [Dramaturgy](#)
  - [History](#)
  - [Musical theatre](#)
  - [Playwrighting](#)
  - [Puppetry](#)
  - [Scenography](#)
  - [Stage design](#)
- [Film \(outline\)](#)
  - [Animation](#)
  - [Film criticism](#)
  - [Filmmaking](#)
  - [Film theory](#)
  - [Live action](#)

## 1.2 Visual arts

Main articles: Visual arts and Outline of the visual arts

- Fine arts
  - Graphic arts
    - Drawing (outline)
    - Painting (outline)
    - Photography (outline)
  - Sculpture (outline)
- Applied arts
  - Animation
  - Calligraphy
  - Decorative arts
  - Mixed media
  - Printmaking
  - Studio art
  - Architecture (Outline of architecture)
    - Interior architecture
    - Landscape architecture
    - Architectural analytics
    - Historic preservation
    - Interior design (interior architecture)
    - Landscape architecture (landscape planning)
    - Landscape design
    - Technical drawing
    - Information architecture
    - Urban planning (urban design)
  - Outline of design
    - Fashion design
    - Textile design
    - User experience design
      - Interaction design
      - User experience evaluation
      - User interface design
    - Visual communication
      - Graphic design
      - Type design
    - Industrial design (product design)
      - Ergonomics (outline)
      - Game design
      - Toy and amusement design

## 2 Humanities

Main articles: Humanities and Outline of the humanities

## 2.1 Geography

Main articles: Geography, Outline of geography, and Human geography

- Cartography (outline)
- Cultural geography
  - Feminist geography
- Economic geography
  - Development geography
- Historical geography
- Political geography & geopolitics
- Population geography
  - Military geography
  - Strategic geography
- Social geography
  - Behavioral geography
  - Children's geographies
  - Health geography
  - Tourism geography
- Time geography
- Urban geography

## 2.2 History

Main articles: History and Outline of history

- African history
- American history
- Ancient history
  - Ancient Greek history (outline)
  - Ancient Roman history (outline)
- Asian history
  - Chinese history
  - Indian history (outline)
  - Indonesian history
  - Iranian history
- Australian history
- Economic history
- Environmental history

- European history
- Intellectual history
- Latin American history
- Modern history
- Political history
- Pre-Columbian era
- Russian history
- Scientific history
- Technological history
- World history

### 2.3 Languages and literature

Main articles: Literature, Outline of literature, and Language

- Linguistics (Outline of linguistics)
  - Applied linguistics
  - Composition studies
  - Computational linguistics
  - Discourse analysis
  - English studies
  - Etymology
  - Grammar
  - Historical linguistics
  - History of linguistics
  - Interlinguistics
  - Lexicology
  - Linguistic typology
  - Morphology (linguistics)
  - Natural language processing
  - Philology
  - Phonetics
  - Phonology
  - Pragmatics
  - Psycholinguistics
  - Rhetoric
  - Semantics
  - Semiotics (outline)
  - Sociolinguistics
  - Syntax
  - Usage

- Word usage
- Comparative literature
- Creative writing
  - Fiction (outline)
  - Non-fiction
- English literature
- History of literature
  - Medieval literature
  - Post-colonial literature
  - Post-modern literature
- Literary theory
  - Critical theory (outline)
  - Literary criticism
  - Poetics
  - Rhetoric
- Poetry
- World literature
  - African-American literature
  - American literature
  - British literature

### 2.4 Philosophy

Main articles: Philosophy and Outline of philosophy

- Aesthetics (outline) / Philosophy of Art
- Applied philosophy
  - Philosophy of education
  - Philosophy of engineering
  - Philosophy of history
  - Philosophy of language
  - Philosophy of law
  - Philosophy of mathematics
  - Philosophy of music
  - Philosophy of religion
  - Philosophy of science
    - Philosophy of biology
    - Philosophy of chemistry
    - Philosophy of economics
    - Philosophy of physics
    - Philosophy of psychology
    - Philosophy of social science

- Systems philosophy
- Epistemology (outline)
  - Justification
  - Reasoning errors
- Ethics (outline)
  - Applied ethics
    - Animal rights
    - Bioethics
    - Environmental ethics
  - Meta-ethics
  - Moral psychology, Descriptive ethics, Value theory
  - Normative ethics
    - Virtue ethics
- History of philosophy
  - Ancient philosophy
  - Contemporary philosophy
  - Medieval philosophy
    - Humanism (outline)
    - Scholasticism
  - Modern philosophy
- Logic (outline)
  - Mathematical logic
  - Philosophical logic
- Meta-philosophy
- Metaphysics (outline)
  - Philosophy of Action
  - Determinism and Free will
  - Ontology
  - Philosophy of mind
    - Philosophy of pain
    - Philosophy of artificial intelligence
    - Philosophy of perception
  - Philosophy of space and time
  - Teleology
  - Theism and Atheism
- Philosophical traditions and schools
  - African philosophy
  - Analytic philosophy
  - Aristotelianism
  - Continental philosophy
  - Eastern philosophy

- Feminist philosophy
- Platonism
- Social philosophy and political philosophy
  - Anarchism (outline)
  - Feminist philosophy
  - Libertarianism (outline)
  - Marxism

## 2.5 Theology

Main articles: Theology and Outline of theology

- Theology
- Bible Studies
- History of the Church
- Religious Studies
- Biblical Hebrew, Biblical Greek, Aramaic

## 3 Social sciences

Main articles: Social science and Outline of social science

### 3.1 Economics

Main articles: Economics and Outline of economics

- Agricultural economics
- Anarchist economics
- Applied economics
- Behavioural economics
- Bioeconomics
- Complexity economics
- Computational economics
- Consumer economics
- Development economics
- Ecological economics
- Econometrics
- Economic geography
- Economic history

- Economic sociology
- Economic systems
- Energy economics
- Entrepreneurial economics
- Environmental economics
- Evolutionary economics
- Experimental economics
- Feminist economics
- Financial econometrics
- Financial economics
- Green economics
- Growth economics
- Human development theory
- Industrial organization
- Information economics
- Institutional economics
- International economics
- Islamic economics
- Labor economics
- Law and economics
- Macroeconomics
- Managerial economics
- Marxian economics
- Mathematical economics
- Microeconomics
- Monetary economics
- Neuroeconomics
- Participatory economics
- Political economy
- Public economics
- Public finance
- Real estate economics
- Resource economics
- Social choice theory
- Socialist economics
- Socioeconomics
- Transport economics
- Welfare economics

### 3.2 Law

Main articles: Law and Outline of law

- Administrative law
- Canon law
- Civil law
  - Admiralty law
  - Animal law/Animal rights
  - Civil procedure
  - Common law
  - Contract law
  - Corporations
  - Environmental law
  - Family law
  - Federal law
  - International law
    - Public international law
    - Supranational law
  - Labor law
  - Paralegal studies
  - Property law
  - Tax law
  - Tort law (outline)
- Comparative law
- Competition law
- Constitutional law
- Criminal law
  - Criminal justice (outline)
  - Criminal procedure
    - Forensic science (outline)
    - Police science
- Islamic law
- Jewish law (outline)
- Jurisprudence (Philosophy of Law)
- Legal management
  - Business law
  - Corporate law
  - Mercantile law
- Procedural law
- Substantive law

### 3.3 Political science

Main articles: Politics, Political science, and Outline of political science

- American politics
- Canadian politics
- Civics
- Comparative politics
- European studies
- Geopolitics (Political geography)
- International relations
- International organizations
- Nationalism studies
- Peace and conflict studies
- Policy studies
- Political behavior
- Political culture
- Political economy
- Political history
- Political philosophy
- Psephology
- Social choice theory

### 3.4 Psychology

Main articles: Psychology, Outline of psychology, and List of psychology disciplines

See also: Branches of psychology, Cognitive science, Affective science, and Behavioural sciences

- Abnormal psychology
- Applied psychology
- Asian psychology
- Biological psychology
- Black psychology
- Clinical neuropsychology
- Clinical psychology
- Cognitive psychology
- Community psychology
- Comparative psychology
- Conservation psychology
- Consumer psychology
- Counseling psychology
- Criminal psychology
- Cultural psychology
- Developmental psychology
- Differential psychology
- Ecological psychology
- Educational psychology
- Environmental psychology
- Evolutionary psychology
- Experimental psychology
- Group psychology
- Family psychology
- Feminine psychology
- Forensic developmental psychology
- Forensic psychology
- Health psychology
- Humanistic psychology
- Indigenous psychology
- Legal psychology
- Masculine psychology
- Mathematical psychology
- Media psychology
- Medical psychology
- Military psychology
- Moral psychology and Descriptive ethics
- Music psychology
- Neuropsychology
- Occupational health psychology
- Occupational psychology
- Organizational psychology
- Parapsychology (outline)
- Pediatric psychology

- Pedology (children study)
- Personality psychology
- Phenomenology
- Political psychology
- Positive psychology
- Psychoanalysis
- Psychobiology
- Psychology of religion
- Psychometrics
- Psychopathology
  - Child psychopathology
- Psychophysics
- Quantitative psychology
- Rehabilitation psychology
- School psychology
- Social psychology
- Sport psychology
- Traffic psychology
- Transpersonal psychology
- East Asian studies
- Indology
- Iranian studies
- Japanese studies
- Korean studies
- Pakistan studies
- Sindhology
- Sinology (outline)
- Southeast Asian studies
- Australian studies
- European studies
  - Celtic studies
  - German studies
  - Scandinavian studies
  - Slavic studies
- Middle Eastern studies
- Behavioral sociology
- Chinese sociology
- Collective behavior
  - Social movements
- Community informatics
  - Social network analysis
- Comparative sociology
- Conflict theory
- Criminology/Criminal justice (outline)
- Critical management studies
- Critical sociology
- Cultural sociology
- Cultural studies/ethnic studies
  - Africana studies
  - Cross-cultural studies
  - Culturology
  - Ethnology
  - Whiteness studies
- Demography/Population
- Digital sociology
- Dramaturgical sociology
- Economic sociology
- Educational sociology
- Empirical sociology
- Environmental sociology

### 3.5 **Sociology**

Main articles: Sociology and Outline of sociology

- Analytical sociology
- Applied sociology
  - Leisure studies
  - Political sociology
  - Public sociology
  - Social engineering
- Architectural sociology
- Area studies
  - African studies
  - American studies
    - Appalachian studies
    - Canadian studies
    - Latin American studies
  - Asian studies
    - Central Asian studies
- Behavioral sociology
- Chinese sociology
- Collective behavior
  - Social movements
- Community informatics
  - Social network analysis
- Comparative sociology
- Conflict theory
- Criminology/Criminal justice (outline)
- Critical management studies
- Critical sociology
- Cultural sociology
- Cultural studies/ethnic studies
  - Africana studies
  - Cross-cultural studies
  - Culturology
  - Ethnology
  - Whiteness studies
- Demography/Population
- Digital sociology
- Dramaturgical sociology
- Economic sociology
- Educational sociology
- Empirical sociology
- Environmental sociology

- Evolutionary sociology
- Feminist sociology
- Figurational sociology
- Futures studies (outline)
- Gender studies
  - Men's studies
  - Women's studies
- Historical sociology
- Human ecology
- Humanistic sociology
- Industrial sociology
- Interactionism
- Interpretive sociology
  - Ethnomethodology
  - Phenomenology
  - Social constructionism
  - Symbolic interactionism
- Jealousy sociology
- Macrosociology
- Marxist sociology
- Mathematical sociology
- Medical sociology
- Mesosociology
- Microsociology
- Military sociology
- Natural resource sociology
- Organizational studies
- Phenomenological sociology
- Policy sociology
- Polish sociology
- Psychoanalytic sociology
- Science studies/Science and technology studies
- Sexology
  - Heterosexism
  - Human sexual behavior
  - Human sexuality (outline)
  - Queer studies/Queer theory
- Sex education
- Social capital
- Social change
- Social conflict theory
- Social control
  - Pure sociology
- Social economy
- Social philosophy
- Social policy
- Social psychology
- Social research
- Social stratification
- Social theory
- Social transformation
  - Computational sociology
  - Economic sociology/Socioeconomics
    - Economic development
    - Social development
- Sociobiology
- Sociocybernetics
- Sociolinguistics
- Sociological theory
- Sociology of aging
- Sociology of agriculture
- Sociology of art
- Sociology of autism
- Sociology of childhood
- Sociology of conflict
- Sociology of culture
- Sociology of cyberspace
- Sociology of development
- Sociology of deviance
- Sociology of disaster
- Sociology of education
- Sociology of emotions
- Sociology of fatherhood

- Sociology of finance
- Sociology of food
- Sociology of gender
- Sociology of generations
- Sociology of globalization
- Sociology of government
- Sociology of health and illness
- Sociology of human consciousness
- Sociology of immigration
- Sociology of knowledge
- Sociology of language
- Sociology of law
- Sociology of leisure
- Sociology of literature
- Sociology of markets
- Sociology of marriage
- Sociology of motherhood
- Sociology of music
- Sociology of natural resources
- Sociology of organizations
- Sociology of peace, war, and social conflict
- Sociology of punishment
- Sociology of race and ethnic relations
- Sociology of religion
- Sociology of risk
- Sociology of science
- Sociology of scientific knowledge
- Sociology of social change
- Sociology of social movements
- Sociology of space
- Sociology of sport
- Sociology of technology
- Sociology of terrorism
- Sociology of the body
- Sociology of the family
- Sociology of the history of science

- Sociology of the Internet
- Sociology of work
- Sociomusicology
- Structural sociology
- Theoretical sociology
- Urban studies or Urban sociology/Rural sociology
- Victimology
- Visual sociology

## 4 Natural sciences

Main articles: Science, Formal sciences, Natural science, and Outline of natural science

### 4.1 Biology

Main article: List of life sciences

See also: Biology and Outline of biology

- Aerobiology
- Anatomy
  - Comparative anatomy
  - Human anatomy (outline)
- Biochemistry (outline)
- Bioinformatics
- Biophysics (outline)
- Biotechnology (outline)
- Botany (outline)
  - Ethnobotany
  - Phycology
- Cell biology (outline)
- Chronobiology
- Computational biology
- Cryobiology
- Developmental biology
  - Embryology
  - Teratology
- Ecology (outline)

- Agroecology
- Ethnoecology
- Human ecology
- Landscape ecology
- Endocrinology
- Evolutionary biology
- Genetics (outline)
  - Behavioural genetics
  - Molecular genetics
  - Population genetics
- Histology
- Human biology
- Immunology (outline)
- Limnology
- Linnaean taxonomy
- Marine biology
- Mathematical biology
- Microbiology
- Molecular biology
- Mycology
- Neuroscience (outline)
  - Behavioral neuroscience
- Nutrition (outline)
- Paleobiology
  - Paleontology
- Parasitology
- Pathology
  - Anatomical pathology
  - Clinical pathology
  - Dermatopathology
  - Forensic pathology
  - Hematopathology
  - Histopathology
  - Molecular pathology
  - Surgical pathology
- Physiology
  - Human physiology
    - Exercise physiology
- Structural Biology
- Systematics (Taxonomy)
- Systems biology
- Virology
  - Molecular virology
- Xenobiology
- Zoology (outline)
  - Animal communications
  - Apiology
  - Arachnology
  - Carcinology
  - Cetology
  - Entomology
    - Forensic entomology
  - Ethnozoology
  - Ethology
  - Helminthology
  - Herpetology
  - Ichthyology (outline)
  - Mammalogy
  - Malacology
    - Conchology
  - Myrmecology (outline)
  - Nematology
  - Neuroethology
  - Oology
  - Ornithology (outline)
  - Planktology
  - Primatology
  - Zootomy
  - Zoosemiotics

## 4.2 Chemistry

Main articles: Chemistry and Outline of chemistry  
 See also: Branches of chemistry

- Agrochemistry
- Analytical chemistry
- Astrochemistry
- Atmospheric chemistry
- Biochemistry (outline)

- Chemical biology
- Chemical engineering (outline)
- Cheminformatics
- Computational chemistry
- Cosmochemistry
- Electrochemistry
- Environmental chemistry
- Femtochemistry
- Flavor
- Flow chemistry
- Geochemistry
- Green chemistry
- Histochemistry
- Hydrogenation
- Immunochemistry
- Inorganic chemistry
- Marine chemistry
- Mathematical chemistry
- Mechanochemistry
- Medicinal chemistry
- Molecular biology
- Molecular mechanics
- Nanotechnology
- Natural product chemistry
- Neurochemistry
- Oenology
- Organic chemistry (outline)
- Organometallic chemistry
- Petrochemistry
- Pharmacology
- Photochemistry
- Physical chemistry
- Physical organic chemistry
- Phytochemistry
- Polymer chemistry
- Quantum chemistry

- Radiochemistry
- Solid-state chemistry
- Sonochemistry
- Supramolecular chemistry
- Surface chemistry
- Synthetic chemistry
- Theoretical chemistry
- Thermochemistry

### 4.3 Earth and space sciences

Main articles: Earth science, Outline of earth science, and Outline of space science

See also: Branches of earth sciences

- Edaphology
- Environmental chemistry
- Environmental science
- Gemology
- Geochemistry
- Geodesy
- Geography (outline)
- Geology (outline)
- Geomorphology
- Geophysics (outline)
- Glaciology
- Hydrogeology
- Hydrology (outline)
- Meteorology (outline)
- Mineralogy
- Oceanography
- Paleontology
  - Paleobiology
  - Paleoecology
- Pedology
- Petrology
- Sedimentology
- Soil science

- Speleology
- Tectonics
- Volcanology
- Astrobiology
- Astronomy (outline)
  - Observational astronomy
    - Gamma ray astronomy
    - Infrared astronomy
    - Microwave astronomy
    - Optical astronomy
    - Radio astronomy
    - UV astronomy
    - X-ray astronomy
- Astrophysics
  - Gravitational astronomy
    - Black holes
- Interstellar medium
- Numerical simulations
  - Astrophysical plasma
  - Galaxy formation and evolution
  - High-energy astrophysics
  - Hydrodynamics
  - Magnetohydrodynamics
  - Star formation
- Physical cosmology
- Stellar astrophysics
  - Helioseismology
  - Stellar evolution
  - Stellar nucleosynthesis
- Planetary science

#### 4.4 Mathematics

Main articles: Mathematics and Outline of mathematics

*See also: Branches of mathematics and Mathematics Subject Classification*

##### Pure mathematics

- Mathematical logic and Foundations of mathematics
  - Intuitionistic logic
  - Modal logic

- Model theory
- Proof theory
- Recursion theory
- Set theory
- Algebra (outline)
  - Associative algebra
  - Category theory
    - Topos theory
  - Differential algebra
  - Field theory
  - Group theory
    - Group representation
  - Homological algebra
  - K-theory
  - Lattice theory (Order theory)
  - Lie algebra
  - Linear algebra (Vector space)
  - Multilinear algebra
  - Non-associative algebra
  - Representation theory
  - Ring theory
    - Commutative algebra
    - Noncommutative algebra
  - Universal algebra
- Analysis
  - Complex analysis
  - Functional analysis
    - Operator theory
  - Harmonic analysis
    - Fourier analysis
  - Non-standard analysis
  - Ordinary differential equations
  - p-adic analysis
  - Partial differential equations
  - Real analysis
    - Calculus (outline)
- Probability theory
  - Ergodic theory
  - Measure theory
    - Integral geometry
  - Stochastic process
- Geometry (outline) and Topology
  - Affine geometry

- Algebraic geometry
- Algebraic topology
- Convex geometry
- Differential topology
- Discrete geometry
- Finite geometry
- Galois geometry
- General topology
- Geometric topology
- Integral geometry
- Noncommutative geometry
- Non-Euclidean geometry
- Projective geometry
- Number theory
  - Algebraic number theory
  - Analytic number theory
  - Arithmetic combinatorics
  - Geometric number theory
- Dynamic programming
- Inventory theory
- Linear programming
- Mathematical optimization
- Optimal maintenance
- Real options analysis
- Scheduling
- Stochastic processes
- Systems analysis
- Statistics (outline)
  - Actuarial science
  - Demography
  - Econometrics
  - Mathematical statistics
- Theory of computation
  - Computational complexity theory

#### Applied mathematics

- Approximation theory
- Combinatorics (outline)
  - Coding theory
- Cryptography
- Dynamical systems
  - Chaos theory
  - Fractal geometry
- Game theory
- Graph theory
- Information theory
- Mathematical physics
  - Quantum field theory
  - Quantum gravity
    - String theory
  - Quantum mechanics
  - Statistical mechanics
- Numerical analysis
- Operations research
  - Assignment problem
  - Decision analysis
- Acoustics
- Applied physics
- Astrophysics
- Atomic, molecular, and optical physics
- Biophysics (outline)
- Computational physics
- Condensed matter physics
- Cryogenics
- Electromagnetism
- Elementary particle physics
- Experimental physics
- Fluid dynamics
- Geophysics (outline)
- Mathematical physics
- Mechanics
- Medical physics
- Molecular physics
- Newtonian dynamics

#### 4.5 Physics

Main articles: Physics and Outline of physics

- Nuclear physics
- Optics
- Plasma physics
- Quantum physics
- Solid mechanics
- Solid state physics
- Statistical mechanics
- Theoretical physics
- Thermodynamics
- Vehicle dynamics

## 5 Applied sciences

Main articles: Applied science and Outline of applied science

### 5.1 Agriculture and agricultural sciences

Main articles: Agriculture and Agricultural sciences

- Agroecology
- Agrology
- Agronomy
- Animal husbandry (Animal science)
  - Beekeeping (Apiculture)
- Entomology
- Agricultural economics
- Agricultural engineering
  - Biological systems engineering
  - Food engineering
- Aquaculture
- Enology
- Food science
- Horticulture
- Hydrology (outline)
- Pedology (soil study)
- Plant science (outline)
  - Pomology
- Viticulture

### 5.2 Computer science

Main articles: Computer science and Outline of computer science

See also: ACM Computing Classification System

*Also a branch of electrical engineering*

- Logic in computer science
  - Formal methods (Formal verification)
  - Logic programming
  - Multi-valued logic
    - Fuzzy logic
  - Programming language semantics
  - Type theory
- Algorithms
  - Computational geometry
  - Distributed algorithms
  - Parallel algorithms
  - Randomized algorithms
- Artificial intelligence (outline)
  - Cognitive science
    - Automated reasoning
    - Computer vision (outline)
    - Machine learning
      - Artificial neural network
      - Support vector machine
    - Natural language processing (Computational linguistics)
  - Expert systems
  - Robotics (outline)
- Data structures
- Computer architecture
- Computer graphics
  - Image processing
  - Scientific visualization
- Computer communications (networks)
  - Cloud computing
  - Information theory
  - Internet, World Wide Web
  - Ubiquitous computing
  - Wireless computing (Mobile computing)
- Computer security and reliability
  - Cryptography

- Fault-tolerant computing
- Computing in mathematics, natural sciences, engineering, and medicine
  - Algebraic (symbolic) computation
  - Computational biology (bioinformatics)
  - Computational chemistry
  - Computational mathematics
  - Computational neuroscience
  - Computational number theory
  - Computational physics
  - Computer-aided engineering
    - Computational fluid dynamics
    - Finite element analysis
  - Numerical analysis
  - Scientific computing (Computational science)
- Computing in social sciences, arts, humanities, and professions
  - Community informatics
  - Computational economics
  - Computational finance
  - Computational sociology
  - Digital humanities (Humanities computing)
  - History of computer hardware
  - History of computer science (outline)
  - Humanistic informatics
  - Database (outline)
    - Distributed database
    - Object database
    - Relational database
  - Data management
  - Data mining
  - Information management
  - Information retrieval
  - Knowledge management
  - Multimedia, hypermedia
    - Sound and music computing
- Distributed computing
  - Grid computing
- Human-computer interaction
- Information science (outline)
- Operating systems
- Parallel computing
  - High-performance computing
- Programming languages
  - Compilers
  - Programming paradigms
    - Concurrent programming
    - Functional programming
    - Imperative programming
    - Logic programming
    - Object-oriented programming
  - Program semantics
  - Type theory
- Quantum computing
- Software engineering
  - Formal methods (Formal verification)
- Theory of computation
  - Automata theory (Formal languages)
  - Computability theory
  - Computational complexity theory
  - Concurrency theory
- VLSI design

### 5.3 Engineering and technology

Main articles: Engineering, Outline of engineering, Technology, and Outline of technology  
 See also: List of engineering branches

#### Chemical Engineering

- Bioengineering
  - Biochemical engineering
  - Biomolecular engineering
- Catalysis
- Materials engineering
- Molecular engineering
- Nanotechnology
- Polymer engineering
- Process design
  - Petroleum engineering
  - Nuclear engineering
  - Food engineering
- Process engineering
- Reaction engineering

- Thermodynamics
- Transport phenomena

### **Civil Engineering**

- Coastal engineering
- Earthquake engineering
- Ecological engineering
- Environmental engineering
- Geotechnical engineering
  - Engineering geology
- Hydraulic engineering
- Mining engineering
- Transportation engineering
  - Highway engineering
- Structural engineering
  - Architectural engineering
- Structural mechanics
- Surveying

### **Educational Technology**

- Instructional design
  - Distance education
  - Instructional simulation
- Human performance technology
- Knowledge management

### **Electrical Engineering**

- Applied physics
- Computer engineering (outline)
- Computer science
- Control systems engineering
  - Control theory
- Electronic engineering
  - Instrumentation engineering
- Engineering physics
  - Photonics
- Information theory

- Mechatronics
- Power engineering
- Quantum computing
- Robotics (outline)
- Semiconductors
- Telecommunications engineering

### **Materials Science and Engineering**

- Biomaterials
- Ceramic engineering
- Crystallography
- Nanomaterials
- Photonics
- Physical Metallurgy
- Polymer engineering
- Polymer science
- Semiconductors

### **Mechanical Engineering**

- Aerospace engineering
  - Aeronautics
  - Astronautics
- Acoustical engineering
- Automotive engineering
- Biomedical engineering
  - Biomechanical engineering
- Continuum mechanics
- Fluid mechanics
- Heat transfer
- Industrial engineering
- Manufacturing engineering
- Marine engineering
- Mass transfer
- Mechatronics
- Nanoengineering
- Ocean engineering
- Optical engineering

- Robotics
- Thermodynamics
- Vehicle engineering

#### **Systems science**

- Chaos theory
- Complex system
- Complex systems
- Conceptual systems
- Control theory
  - Affect control theory
  - Control engineering
  - Control systems
  - Dynamical systems
  - Perceptual control theory
- Cybernetics
  - Biocybernetics
  - Engineering cybernetics
  - Management cybernetics
  - Medical cybernetics
  - New Cybernetics
  - Second-order cybernetics
  - Sociocybernetics
- Network science
- Operations research
- Systems biology
  - Computational systems biology
  - Synthetic biology
  - Systems immunology
  - Systems neuroscience
- System dynamics
  - Social dynamics
- Systems ecology
  - Ecosystem ecology
- Systems engineering
  - Biological systems engineering
  - Earth systems engineering and management
  - Enterprise systems engineering
  - Systems analysis

- Systems psychology
  - Ergonomics
  - Family systems theory
  - Systemic therapy
- Systems theory
  - Biochemical systems theory
  - Ecological systems theory
  - Developmental systems theory
  - General systems theory
  - Living systems theory
  - LTI system theory
  - Mathematical system theory
  - Sociotechnical systems theory
  - World-systems theory
- Systems theory in anthropology

#### **5.4 Medicine and health sciences**

Main articles: Medicine, Healthcare science, and Outline of health sciences

See also: Outline of medicine and Branches of medicine

- Alternative medicine
- Cardiology
  - Cardiac electrophysiology
- Clinical laboratory sciences/Clinical pathology/Laboratory medicine
  - Clinical biochemistry
  - Cytogenetics
  - Cytohematology
  - Cytology (outline)
  - Haemostasiology
  - Histology
  - Clinical immunology
  - Clinical microbiology
  - Molecular genetics
  - Parasitology
- Clinical physiology
- Dentistry (outline)
  - Dental hygiene and epidemiology
  - Dental surgery
  - Endodontics
  - Implantology

- Oral and maxillofacial surgery
- Orthodontics
- Periodontics
- Prosthodontics
- Dermatology
- Emergency medicine (outline)
- Endocrinology
- Gastroenterology
  - Hepatology
- Geriatrics
- Gynaecology
- Health informatics/Clinical informatics
- Hematology
- Infectious disease
- Intensive care medicine
- Internal medicine
- Medical toxicology
- Music therapy
- Nephrology
- Neurology
- Nursing
- Nutrition (outline) and dietetics
- Obstetrics (outline)
- Occupational hygiene
- Occupational therapy
- Occupational toxicology
- Oncology
- Ophthalmology
  - Neuro-ophthalmology
- Optometry
- Orthoptics
- Otolaryngology
- Pathology
- Pediatrics
- Pharmaceutical sciences
  - Pharmacy
- Physical fitness
  - Group Fitness / aerobics
  - Kinesiology / Exercise science / Human performance
  - Personal fitness training
- Physical therapy
- Physiotherapy
- Podiatry
- Preventive medicine
- Primary care
  - General practice
- Psychiatry (outline)
  - Forensic psychiatry
- Psychology (outline)
- Public health
- Pulmonology
- Radiology
- Recreational therapy
- Rehabilitation medicine
- Respiratory therapy
- Rheumatology
- Sleep medicine
- Speech-language pathology
- Sports medicine
- Surgery
  - Bariatric surgery
  - Cardiothoracic surgery
  - Neurosurgery
  - Orthopedic surgery
  - Plastic surgery
  - Trauma surgery
  - Traumatology
- Urology
  - Andrology
- Veterinary medicine

## 6 See also

Main article: Branches of science

- Academia (outline)
- Academic genealogy
- Curriculum
- Multidisciplinary approach
- Interdisciplinarity
- Transdisciplinarity
- Professions
- Classification of Instructional Programs
- Joint Academic Coding System
- List of fields of doctoral studies in the United States

## 7 References

- Abbott, Andrew (2001). *Chaos of Disciplines*. University of Chicago Press. ISBN 978-0-226-00101-2.
- Oleson, Alexandra; Voss, John (1979). *The Organization of knowledge in modern America, 1860-1920*. ISBN 0-8018-2108-8.
- US Department of Education Institute of Education Sciences. *Classification of Instructional Programs (CIP)*. National Center for Education Statistics.

## 8 External links

- Classification of Instructional Programs (CIP 2000): Developed by the U.S. Department of Education's National Center for Education Statistics to provide a taxonomic scheme that will support the accurate tracking, assessment, and reporting of fields of study and program completions activity.
- Complete JACS (Joint Academic Classification of Subjects) from Higher Education Statistics Agency (HESA) in the United Kingdom
- Australian and New Zealand Standard Research Classification (ANZSRC 2008) (web-page) Chapter 3 and Appendix 1: Fields of research classification.
- Fields of Knowledge, a zoomable map allowing the academic disciplines and sub-disciplines in this article be visualised.

- Online reference materials for any kind of specific academic disciplines .

Content listings

Types

- Overviews
- Featured content
- Outlines
- Lists
- Portals
- Glossaries
- Categories
- Indices

Topics

- Current events
- Reference
- Culture
- Geography
- Health
- History
- Mathematics
- Nature
- People
- Philosophy
- Religion
- Society
- Technology

Places, people and times

- Academic disciplines
- Anniversaries
  - today
- Countries and territories
- People
  - deaths this year

- Timelines
  - centuries
  - decades

#### Indices

- A–Z index
- Categories
- Dewey Decimal classes
- Library of Congress Classification
- Roget's Thesaurus
- Spoken articles
- Wikipedia books

## 9 Text and image sources, contributors, and licenses

### 9.1 Text

- Outline of academic disciplines** *Source:* [https://en.wikipedia.org/wiki/Outline\\_of\\_academic\\_disciplines?oldid=776838216](https://en.wikipedia.org/wiki/Outline_of_academic_disciplines?oldid=776838216) *Contributors:* Wesley, The Anome, Slrubenstein, ClaudineChionh, William Avery, SimonP, Daniel C. Boyer, Xoder, Mrwojo, Lir, Tillwe, Michael Hardy, Tim Starling, Lxor, Isomorphic, GULLman, MartinHarper, Berowell, SebastianHelm, Ahoerstemeier, Stan Shebs, TUF-KAT, Skynxnex, Glenn, Qwert, Mxn, Pizza Puzzle, Nikola Smolenski, Mydogategodshat, Coren, Colipon, DtgM, Steinsky, Lord Emsworth, Rbellin, Chrisjj, Penfold, SonofRage, Robbot, Noldoaran, Altenmann, Nurg, Seglea, Stewartadcock, Sunray, Fuelbottle, Cyrius, Alan Liefjting, Marc Venot, Benji Franklyn, Andries, Washington iring, Jahaza, Markus Kuhn, Jfdwolff, H-2-O, Dkmiller, Heysup420, Gadfium, Andy-cjp, Beland, Catdude, Jossi, CaribDigita, Necrothesp, Icairns, CesarFelipe, Karl-Henner, Sam Hocevar, Marcos, Gcshoyru, Neutrality, Ukexpat, Agari, Robin klein, Simonides, Heegoop, Cjoshuav, Rspeer, Francis Schonken, Max Terry, LindsayH, BcJordan, Kwamikagami, Antiorario, Muntfish, CeeGee, Reinyday, 9SGjOSfyHJaQVvEmy9NS, Dzou, Nlight, Jojit fb, NickSchweitzer, Pschemp, Martg76, Mdd, Jumbuck, Gary, Paleorthid, CheeseDreams, SlimVirgin, Avenue, Wtmitchell, Erik, Saga City, Scholz, SteinBDJ, Oleg Alexandrov, Stuartyeates, Angr, The JPS, Woohookitty, RHaworth, Anilocra, Ganeshk, Jacobolus, Acidmonkey, SP-KP, Jeff3000, Psneog, Gaf.arq, Dedalus, Bduttabaruah, Joerg Kurt Wegner, Stefanomione, LtSM, BD2412, Electionworld, Rkevins, Canderson7, Benthrot, Mayumashu, Koavf, Cyrusjp, Quiddity, Vegaswikian, Daniel Collins, DoubleBlue, Tpkunesh, RobertG, SouthernNights, B44H, Gurch, TheDJ, TeaDrinker, Elviajeropaisa, Reetep, Bgwhite, YurikBot, RussBot, Zafiroblue05, Mark Ironie, Thomas E. Goodwin, G.G., The Ogre, Dumoren, Yoninah, Pyrotec, Jpbowen, Yoosof Pooranvary, Plachert, Moe Epsilon, Farmanesh, Rockero, Howee, Sveit, MaxVeers, Samoduor, Bota47, Woffling, Wknight94, Pegship, StevenL, Cpritchett42, Zzuuzz, Vegomatic, Feedmymind, JoanneB, AlexD, Allens, Neilgravir, Jeremy Butler, Krótki, C mon, JLL, SmackBot, Alan Pascoe, Jsdillon, Herostratus, Hydrogen Iodide, Rentier, Pfaff9, HalfShadow, The Rhymesmith, Gilliam, Donama, Hmains, The Famous Movie Director, Mordac, Jon513, Ankurjain, Fplay, Mattythewhite, Jerome Charles Potts, Markbarnes, DHN-bot-enwiki, Hongooi, DARTH Panda, Sajendra, The Placebo Effect, Vanished User 0001, Nixeeagle, Szarka, Huon, Cybercobra, EPM, Fullstop, Dreadstar, Nexus Seven, Elbac14, Shushruth, Ice tres, Mitchumch, Suidafrikaan, Navidnak, Will Beback, Byelf2007, Amtiss, LtPowers, Celefin, The Tramp, MarkSutton, Vir, Amirman, Eridani, Sijo Ripa, RichardF, PMJ, Informationplusgood, Keycard, Muppani, MikeWazowski, Levineps, Hetar, OnBeyondZebrax, Etaonsh, IvanLanin, UncleDouggy, Shoreranger, Tawkerbot2, Patchoulian, CRGrowthouse, Postmodern Beatnik, Ivan Pozdeev, Xlegiofalco, Dr.Bastedo, Fokion, Thomasmeeks, Basar, Gregbard, Funnyfarmofdoom, Cydebot, Cahk, Matrix61312, Gogo Dodo, Eu.stefan, Dynaflow, Kozuch, Epbr123, Wachowich, Mojo Hand, Katzja, Bobblehead, RichardVeyard, Voyaging, Little Rachael, Osubuckeyeguy, Zweifel, 2bornot2b, Dashcom, Wayiran, Qwerty Binary, That dirk guy, Bishop pam, JAnDbot, Husond, The Transhumanist, Guff15, Zorro CX, VoABot II, JamesBWatson, TARBOT, PoisonedQuill, Elliotb2, MCG, JaGa, Ac44ck, Pax:Vobiscum, Oicumayberight, MartinBot, Robert Daoust, Davidjcmorris, R'n'B, CommonsDelinker, Smokizzy, Ospan, J.delanoy, Ozmaweezer, Dbiel, Eliz81, Athaenara, NerdyNSK, Akalanaki, Renamed user 5417514488, Apostle12, Bsather, Mrg3105, The Transhumanist (AWB), Christopher Kraus, Jamesontai, Kolja21, Sphinxridd, DASonnenfeld, CardinalDan, Vishnu.ae, Jonas Mur-enwiki, Remi0o, Hugo999, Renamed user 1579654863, VolkovBot, Djcremer, AlnoktaBOT, Vbd, Scholarwiki-enwiki, Benhur767, Zrallo, Reibot, Guillaume2303, Llamabr, Historyguy1967, LeaveSleaves, Bearian, Hoffman2121, Pasacalgary, Lova Falk, Chronlung, Chewysan101, Veluweland, Palaeovia, Doc James, FlyingLeopard2014, Acudoc27, Lazeaway, Chill Factor Five, S.Örvarr.S, Francisleecy-enwiki, Prof. Dr. Habib Ahmad, Romuald Wróblewski, Blocko42, StAnselm, Madman, Chimin 07, Ødipus sic, WTucker, Fabbosko-enwiki, Yintan, ASAWebSiteChair, Quest for Truth, Spikesun2007, Oxymoron83, Byrialbot, Dmpyzel, Jdalonar, Sapovadia, WikiWikiUser, Yoda of Borg, CharlesGillingham, Denisarona, CarlDowse, Sarnobat, ClueBot, Loubnakurz, The Thing That Should Not Be, TaffIchikwavira, Kathleen.wright5, Princeattractive, Niceguyedc, TarzanASG, Tenmick, Puchiko, Amirul2008, Shustov, AndreiDukhin, Ktr101, Excirial, Tim32, CrazyChemGuy, PratoDppande, Billa99, Atmundi-enwiki, Taingalls, BirgerH, OpusDiabolus, Jke6245, Iohannes Animosus, Dopenked, Sarindam7, Dkincheloe, Versus22, Editor2020, Crownstet, Classicrockfan42, Vanished User 1004, PretentiousSnot, Bearsona, Skunkboy74, AgnosticPreachersKid, Pfhorrest, DoctorHver, Q Valda, Eclipse, Leonini, Addbot, Eshaeffer, Fgnievinski, LeisureG8R, Apphiron, Fieldday-sunday, Mynscl, Leszek Jańczuk, Chaturvedi.mayank, CarsracBot, Alexiusnovius, Jasper Deng, M9rcell9, Tide rolls, Teles, JEN9841, Math Champion, Yobot, Ptbogourou, TaBOT-zerem, Arla, Anypodetos, Nallimbot, TestEditBot, Yotaloop, AnomieBOT, Rubinbot, Galoubet, Mbiama Assogo Roger, Keitherson, Minneologies, MaterialsScientist, Trihoiseachaithe, Whitehallpic, Sandipsonje, Stud319, Xqbot, Apeke, Wkme20089, Jyusin, Drilnoth, Lewismcanally, Isheden, Omnipaedista, Lwoodyiii, Heliotrope99, Dijkshneier, Jimwalez, Krshn p1, Sap chacks, EmekaVincent, Reggieknopoff, Sulaymaan114, Reinhard Hartmann, FrescoBot, Awesomely gay, Remotelysensed, Georgios.papadopoulos, Seelum, Deang619, Sheejaw, Clamm, Theorist2, Quantoyster, Tommydenham, Bobmack89x, Kiefer, Wolfowitz, Vasilcho, Mj, Sreenivasa Reddy Mulinti, Rikard H, Orenburg1, Gamewizard71, Montell 74, SchreyP, Tokorokoko, Duo-duo, Gopalkoduri, DARTH SIDIOUS 2, Mean as custard, Ripchip Bot, Dwalkerus, Eavayjb, FC Toronto, Vernongetzler, EmausBot, Soccybrarian, WikitanvirBot, RA0808, Winner 42, Wikipelli, K6ka, Weriet, ZéroBot, Magaelam, Joshlepaknpa, MarkinVancouver, Ironnail, Staszek Lem, AngeloSabag, Rkannoth, Donner60, DHoodPPDM, Jackhakim, WakebrdKd, Chicadita, Neil P. Quinn, 28bot, ClueBot NG, Jack Greenmaven, MelbourneStar, Vi1618, Kickthedonkey01, Shnyusasl, Sicco Jan Bier, DanielR450, 2crudedudes, Widr, Stephanie Lahey, MerllwBot, Useamuse, Oddbodz, Helpful Pixie Bot, Wbm1058, Mike3606, Tklink, BG19bot, Nastafication, KangarooPower, PhnomPencil, Agdhinda, Hallows AG, Oplatiyal, Benzband, Gorthian, Kumarvinayy, Tumuhimbise, Wellsykins, Filmwrite, Kyonzuken, Minsbot, NitishParida, Dark crimson1985, Eossipov, Srizvic, Medianews2011, Vasim Tyagi, David.moreno72, Tommybgun12345, Magadeath, Matthias Drochner, Tonyxc600, ChrisGualtieri, Therearenogoodusernames, Dadamkhan, Bharu12, AEFSSchools, MadGuy7023, Hdutta12, Dexbot, KubiakPaulina, Polsky215, Zhuddeshya, Jeff Erickson, STEREO ACADEMY, RAVI KANT MISHRA GONDA, Ubertragung, Sheldonc1981, Epicgenius, CivilProductDesign, Egaalyare, LibrarianAnnie, Daniel.villar7, Biogeographerist, Airwars, Hassan izzeddin, Pushkar raj chataut, Anandsreekumarnair, Hzakir94, Zezum7, Ds0055827, Angelina amaya, Dctrzl, Magravat, Farsinevisaneiran, Singer krishna, Textaural, Girijaprasanbalm, Prisencolin, Alejgonz 01, Mike2085, JoeHebda, Cjdrub, Cellas is good, Ahk2gs, KBH96, Archiloc, TranquilHope, HelloBestFriends, Ianjgrant, Gourlaysama, Loraof, Lyndonbaines, EoRdE6, Julietdeltalima, Jigigocortez, Stars of 85, Rhodzy123, Sysmani, Jonasneubauer17, Massiullah Mohamed Zai Sherzay, SomeRandomPasserby, ManiKandan Kolanginathan, Timothyjosephwood, SaltySloth, Dannybarron, Seth Khan, Sro23, Kathleenrueb, TheScientificMethod, Abdullahi2244, Sagar M Jagtap, Linguist111, CLCStudent, Qzd, SlimKH45, Fuortu, Arnaud2304, Bear-rings, Links.back, Zephyrinus N Wiefue, Magic Fizz, Gregoryadapter and Anonymous: 470

## **9.2 Images**

### **9.3 Content license**

- Creative Commons Attribution-Share Alike 3.0