Chemistry (CHE)

C1-Inorganic Chemistry

Catalysis
Coordination chemistry
Inorganic and nuclear chemistry
NMP Non-Metallic Materials & basic processes
Organometallic chemistry
Radiation and nuclear chemistry

C2-Organic, Polymer and Molecular Chemistry

Carbonhydrates
Combinatorial chemistry
Heterocyclic chemistry
Macromolecular chemistry
Molecular architecture and structure
Molecular biology
Molecular chemistry
Natural product synthesis
Organic chemistry
Organic reaction mechanism
Peptide chemistry
Polymer chemistry
Stereochemistry
Supramolecular chemistry
Synthetic Organic chemistry

C3-Physical and Analytical Chemistry

Analytical chemistry
Chemical instrumentation
Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
Chemistry of condensed matter
Chromatography
Colloid chemistry
Corrosion
Crystallography and X-ray diffraction
Electrochemistry, electrodialysis, microfluidics, sensors
Forensic chemistry
Heterogeneous catalysis
Homogeneous catalysis
Ionic liquids
Mass Spectrometry

Method development in chemistry
Microscopy
Molecular dynamics
Molecular electronics
Photocatalysis
Photochemistry
Physical chemistry
Physical chemistry of biological systems
Quantum Chemistry
Spectroscopic and spectrometric techniques
Structure and dynamics of disordered systems: soft matter (gels, colloids, liquid crystals, etc.), liquids, glasses, defects, etc.
Surface chemistry
Theoretical and computational chemistry
Trace Analysis

C4-Applied and Industrial Chemistry

Biochemistry
Biological chemistry
Biomaterials, biomaterials synthesis
Ceramics
Coating and films
Drinking water treatment
Electrochemistry, batteries and fuel cells
Environment chemistry
Enzymology
Food chemistry
Fuel cell technology
Graphene, 2D materials
Hydrogen
Intelligent materials, self-assembled materials
Materials for sensors
Medicinal chemistry
Nanochemistry
New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
Pharmaceutical chemistry
Polymers and plastics
Porous Materials
Structural properties of materials
Surface modification
Thin films
Toxicology

Economic Sciences (ECO)

E1-Economics

Behavioural economics
Big data
Development, economic growth
Econometrics, statistical methods
Economic geography
Economic history
Industrial economics
International trade
Labour economics
Macroeconomics
Public economics
Social economics
Urban and regional economics

E2-Economic Development

Competitiveness, innovation, research and development
Economics of innovation
Industrial clusters
Natural resources and environmental economics

E3-Management

Business governance
Entrepreneurship
Human resource management
Innovation management
Marketing strategy
New industrial value chains
Organization studies: theory & strategy, industrial organization
Startups

E4-Finance

Accounting
Banking, corporate finance, accounting
Finance, banking, insurance
Financial & Investment management
Financial markets, asset prices, international finance
Venture capital

Information Science and Engineering (ENG)

G1-Computer science and informatics

Algorithms, distributed, parallel and network algorithms, algorithmic game theory
Artificial intelligence, intelligent systems, multi agent systems
Augmented Reality
Bioinformatics, biocomputing, and DNA and molecular computation
Cloud computing
Cognitive science
Complexity and cryptography, electronic security, privacy, biometrics
Computer architecture, pervasive computing, ubiquitous computing
Computer games
Computer graphics, computer vision, multi media, computer games
Computer hardware and architecture
Data mining
E-Commerce
E-learning, user modelling, collaborative systems
Embedded systems
Human computer interaction and interface, visualization and natural language processing
Intelligent robotics, cybernetics
Internet and semantic web, database systems and libraries
Internet of Things
Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)
Multimedia
Networks (communication networks, sensor networks, networks of robots, etc.)
Numerical analysis, simulation, optimisation, modelling tools
Ontologies, neural networks, genetic programming, fuzzy logic
Quantum Technologies (e.g. computing and communication)
Scientific computing and data processing
Software engineering, operating systems, computer languages
Theoretical computer science, formal methods
Virtual Reality

G2-Systems and Communication Engineering: Electrical, electronic, communication, optical and systems engineering

Control engineering
Diagnostic and implantable devices, environmental monitoring
Electrical and electronic engineering: semiconductors, components, systems
Electronics, photonics

Human computer interaction
Nanotechnology, nano-materials, nano engineering
Signal processing
Simulation engineering and modelling
Systems engineering, sensorics, actorics, automation
Wireless communications, communication, high frequency, mobile technology

G3-Products and Processes Engineering: Product design, process design and control, construction methods, civil engineering, energy processes, material engineering

Aerospace engineering
Architecture, smart buildings, smart cities, urban engineering
Chemical engineering, technical chemistry
Civil engineering
Civil engineering, maritime/hydraulic engineering, geotechnics, waste treatment
Computational engineering and computer aided design
Energy collection, conversion and storage, renewable energy
Energy systems, smart energy, smart grids, wireless energy transfer
Environmental engineering and geotechnics
Fluid mechanics, hydraulic-, turbo-, and piston engines
Industrial bioengineering
Industrial design (product design, ergonomics, man-machine interfaces, etc.)
Lightweight construction, textile technology
Maritime Engineering
Materials engineering
Mechanical and manufacturing engineering (shaping, mounting, joining, separation)
Production technology, process engineering
Sustainable design (for recycling, for environment, eco-design)
Transport engineering, intelligent transport systems

Environmental and Geosciences (ENV)

V1-Environment and society

Circular economy
Environmental health
Environmental regulations and climate negotiations
Environmental risk measurement
Mobility and transportation
Renewable energy sources
Spatial and regional planning
Sustainable development and nature protection

Urbanization and urban planning, cities

V2-Earth system science

Air and water pollution control
Atmospheric chemistry, atmospheric composition, air pollution
Biogeochemistry, biogeochemical cycles, environmental chemistry
Climatology and climate change
Coastal Engineering
Cryosphere, dynamics of snow and ice cover, sea ice, permafrost and ice sheets
Earth observations from space/remote sensing
ENV Environmental Hazard Analysis
Environment, Pollution & Climate
Environmental chemistry
Geochemistry and geophysics
Geology, tectonics, volcanology
Hydrology
Meteorology, atmospheric physics and dynamics
Mineralogy, petrology, igneous petrology, metamorphic petrology
Natural resources exploration and exploitation
Paleoclimatology, paleoecology
Physical geography
Sedimentology, soil science, palaeontology, earth evolution
Terrestrial ecology, land cover change

V3-Evolutionary, population and environmental biology

Animal behaviour
Biodiversity, comparative biology
Biodiversity, conservation biology, conservation genetics
Biogeography, macro-ecology
Ecology
Environmental toxicology at the population and ecosystems level
Freshwater biology
Marine biology
Population biology, population dynamics, population genetics
Species interactions (e.g. food-webs, symbiosis, parasitism, mutualism, bio-invasion)
Systems evolution, biological adaptation, phylogenetics, systematics

V4-Applied Life Sciences and Non-Medical Biotechnology

Agricultural waste
Agriculture / Forestry / Rural Development
Agriculture related to animal husbandry, dairying, livestock raising

Agriculture related to crop production, applied plant biology
Agriculture related to crop production, soil biology and cultivation, applied plant biology
Agroindustry
Applied biotechnology (non-medical), bioreactors, applied microbiology
Aquaculture, fisheries
Biohazards, biological containment, biosafety, biosecurity
Biomimetics
Environmental biotechnology, bioremediation, biodegradation
Forestry, biomass production (e.g. for biofuels)

Life Sciences (LIF)

L1-Molecular and Structural Biology

Biophysics (e.g. transport mechanisms, bioenergetics, fluorescence)
Carbohydrate synthesis, modification and turnover
DNA synthesis, modification, repair, recombination, degradation
Lipid synthesis, modification and turnover
Metabolism
Molecular biology and interactions
Protein synthesis, modification and turnover
RNA synthesis, processing, modification and degradation
Structural biology

L2-Genetics, Genomics, Bioinformatics and Systems Biology

Applied genetic engineering, transgenic organisms, recombinant proteins, biosensors
Bioinformatics
Biological systems analysis, modelling and simulation
Biostatistics
Computational biology
Epigenetics and gene regulation
Genetic engineering
Genetic epidemiology
Genomics, comparative genomics, functional genomics
Metabolomics
Molecular genetics, reverse genetics and RNAi
Pharmacogenomics
Plant genetics
Proteomics
Quantitative genetics
Systems biology

Transcriptomics

L3-Cellular and Developmental Biology

Animal-related development, development genetics, pattern formation and embryology
Cell biology and molecular transport mechanisms
Cell differentiation, physiology and dynamics
Cell signalling and cellular interactions
Development, developmental genetics, pattern formation and embryology in plants
Developmental biology
Morphology and functional imaging of cells
Organelle biology
Signal transduction
Stem cell biology

L4-Physiology, Pathophysiology and Endocrinology

Ageing
Cancer and its biological basis
Cardiovascular diseases
Comparative physiology and pathophysiology
Endocrinology
Metabolism, biological basis of metabolism related disorders
Organ physiology and pathophysiology
Rare diseases
Technologies involving the manipulation of cells, tissues, organs or the whole organism (assisted reproduction)

L5-Neurosciences and neural disorders

Behavioural neuroscience (e.g. sleep, consciousness, handedness)
Developmental neurobiology
Mechanisms of pain
Molecular and cellular neuroscience
Neuroanatomy and neurophysiology
Neuroimaging and computational neuroscience
Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease)
Poisoning
Psychiatric disorders
Sensory systems (e.g. visual system, auditory system)

L6-Immunity and infection

Adaptive immunity
Anticancer therapy
Bacteriology
Biological basis of immunity related disorders (e.g. autoimmunity)
Immunogenetics
Immunological memory and tolerance
Immunosignalling
Innate immunity and inflammation
Microbiology
Parasitology
Phagocytosis and cellular immunity
Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide)
Veterinary medicine and infectious diseases in animals
Virology

L7-Diagnostic tools, therapies and public health

Biophotonics, Imaging, image and data processing
Bioremediation, diagnostic biotechnologies (DNA chips and biosensing devices) in environmental management
Drug development, clinical phases
Environment and health risks, occupational medicine
Gene therapy, cell therapy, regenerative medicine
Health services, health care research
Medical engineering and technology
Personalised medicine
Pharmacology, pharmacogenomics, drug discovery and design, drug therapy
Public health and epidemiology
Radiation therapy
Radiology, nuclear medicine and medical imaging
Surgery
Tissue engineering
Vaccines

Mathematics (MAT)

M1-Mathematics

Algebraic and complex geometry
Algorithms and complexity
Discrete mathematics and combinatorics
Geometry
Logic and foundations
Number theory

Operator algebras and functional analysis
Probability
Theoretical aspects of partial differential equations
Topology

M2-Applied Mathematics

Application of mathematics in sciences
Mathematical aspects of Computer Science
Mathematical physics
Numerical analysis and scientific computing
Scientific computing, simulation and modelling tools
Statistics

Physics (PHY)

P1-Particle and Nuclear Physics

Fundamental interactions and fields
Nuclear physics
Observational astronomy: cosmic rays, neutrinos, and other particles
Particle physics
Particles and fields physics

P2-Atomic and molecular physics, optics

Atomic, molecular physics
Chemical physics
Lasers, ultra-short lasers and laser physics
Metrology and measurement
Nonlinear optics
Optics (including laser optics and quantum optics)
Optics, non-linear optics and nano-optics
Photonics
Quantum optics and quantum information
Statistical physics (gases)
Ultra-cold atoms and molecules
Wave Interaction and Propagation

P3-Condensed matter physics

Condensed matter physics (including formerly solid state physics, superconductivity)
Electronic properties of materials, surfaces, interfaces, nanostructures, etc
Fluid dynamics

Gas and plasma physics
Magnetism and strongly correlated systems
Mechanical and acoustical properties of condensed matter, Lattice dynamics
Mesoscopic physics
Nanophysics: nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics, etc.
Phase transitions, phase equilibria
Semiconductors and insulators: material growth, physical properties
Soft condensed matter
Spintronics
Statistical physics (condensed matter)
Structure of solids and liquids
Superconductivity
Superfluids
Surface Physics
Thermal properties of condensed matter
Transport properties of condensed matter

P4-Astrophysics, Cosmology, Space science

Astrobiology
Astrochemistry
Clusters of galaxies and large scale structures
Cosmology
Dark matter, dark energy
Exoplanets
Formation and evolution of galaxies
Formation of stars and planets
Gravitational astronomy
High energy and particles astronomy - X-rays, cosmic rays, gamma rays, neutrinos
Instrumentation - telescopes, detectors and techniques
Interstellar medium
Nuclear astrophysics
Observational astronomy: radio
Relativistic astrophysics
Solar and interplanetary physics
Solar physics
Space weather
Stellar systems: multiple stars, clusters, and associations

P5-Applied physics

Acoustics
Communication Systems
Computational modelling

Geophysics
Lasers and laser optics
Macroscopic quantum phenomena: superconductivity, superfluidity, etc.
Medical physics
Optical engineering, photonics, lasers
Optoelectronics
Photonic integration, photonic integrated circuits
Photovoltaics
Plasmonics and metamaterials
Solid state materials
Statistical physics: phase transitions, noise and fluctuations, models of complex systems, etc.

Social Sciences and Humanities (SOC)

S1-Sociology, social anthropology

Ageing, work, social policies
Demography
Ethnography
Globalisation
Globalisation, migration, interethnic relations
Households, family and fertility
Integration of refugees and migrants
Kinship, cultural dimensions of classification and cognition, identity
Myth, ritual, symbolic representations, religious studies
Rural development studies
Social and behavioural science
Social Inclusion
Social policies, work and welfare
Social structure, inequalities, social mobility, interethnic relations
Sociology
Transformation of societies, democratization, social movements
Urban studies, regional studies
Women and gender studies
Youth policy

S2-Political science

Collective Awareness
EU International Relations and Diplomacy Studies
EU research policy /Research policies in the EU
Geopolitics
Human and social geography
Migration

Non-discrimination
Peace and conflict studies
Political economy, institutional economics, law and economics
Political systems and institutions, governance
Political theory
Public administration
Violence, conflict and conflict resolution

S3-Law

Civil law, commercial law
Criminal law
Data protection
Global and transnational governance, international law, human rights
Health law rights
Intellectual property rights
International private law
Law
Legal studies, constitutions, comparative law
Legal systems, constitutions, foundations of law
Private, public and social law

S4-Communication

Communication networks, media, information society
Crisis management
Digital Social Innovation
Media and socio-cultural communication
Social Media
Social studies of science and technology

S5-Cognition, psychology, linguistics

Cognition (e.g. learning, memory, emotions, speech)
Developmental psychology
Ergonomic and Human factors
Evolution of mind and cognitive functions, animal communication
Fatigue and stress observation, analysis and coping
Formal, cognitive, functional and computational linguistics
Human life-span development
Neuropsychology and cognitive psychology
Psycholinguistics and neurolinguistics: acquisition and knowledge of language, language pathologies
Social psychology
Typological, historical and comparative linguistics

Use of language: pragmatics, sociolinguistics, discourse analysis, second language teaching and learning, lexicography, terminology

S6-Philosophy

Epistemology, logic, philosophy of science
Ethics and morality, bioethics
History of philosophy
Philosophy
Philosophy of mind, epistemology and logic
Philosophy, Ethics and Religion

S7-Education

Education
Educational psychology
Life long learning
Pedagogy

S8-Literature, arts, music, cultural and comparative studies

Arts (arts, history of arts, performing arts, music)
Classics, ancient Greek and Latin literature and art
Comparative literature
Cultural memory, intangible cultural heritage
Cultural studies, cultural diversity
Design
Fashion design
General literature studies
History of art and architecture
History of literature
Libraries and archives
Library science
Literary theory and comparative literature, literary styles
Museums and exhibitions
Music and musicology, history of music
Studies on Film, Radio and Television
Textual philology, palaeography and epigraphy

S9-Archaeology, history and memory

Ancient history
Archaeology
Archaeology, archaeometry, landscape archaeology
Collective memories, identities, lieux de mémoire, oral history

Colonial and post-colonial history, global and transnational history, entangled histories
Cultural heritage, cultural memory
Cultural history, history of collective identities and memories
Diplomatics
Egyptology
Gender history
Historiography, theory and methods of history
History of archaeology
History of ideas, intellectual history, history of science, techniques and technologies
Medieval history
Military history
Modern and contemporary history
Numismatics, epigraphy
Prehistory and protohistory
Social, economic, cultural and political history