

SETTORI ERC

Social Sciences and Humanities

SH1 Individuals, institutions and markets: economics, finance and management

- SH1_1 Macroeconomics, growth, business cycles
- SH1_2 Microeconomics, institutional economics
- SH1_3 Econometrics, statistical methods
- SH1_4 Financial markets, banking and corporate finance
- SH1_5 Competitiveness, innovation, research and development
- SH1_6 Consumer choice, behavioural economics, marketing
- SH1_7 Organization studies, strategy
- SH1_8 Human resource management, employment and earnings
- SH1_9 Public administration, public economics
- SH1_10 Income distribution, poverty
- SH1_11 International trade, economic geography
- SH1_12 Economic history, development

SH2 Institutions, values, beliefs and behaviour: sociology, social anthropology, political science, law, communication, social studies of science and technology

- SH2_1 Social structure, inequalities, social mobility
- SH2_2 Ageing, work, social policies
- SH2_3 Kinship, cultural dimensions of classification and cognition, individual and social identity, gender
- SH2_4 Myth, ritual, symbolic representations, religious studies
- SH2_5 Ethnography
- SH2_6 Globalization, migration, interethnic relations
- SH2_7 Transformation of societies, democratization, social movements
- SH2_8 Political systems, legitimacy of governance
- SH2_9 Legal systems, constitutions, foundations of law
- SH2_10 Private, public and social law
- SH2_11 Global and transnational governance, international law, human rights
- SH2_12 Communication networks, media, information society
- SH2_13 Social studies of science and technology, S&T policies, science and society
- SH2_14 History of science and technology

SH3 Environment and society: environmental studies, demography, social geography, urban and regional studies

- SH3_1 Environment and sustainability
- SH3_2 Environmental regulation and mediation
- SH3_3 Social and industrial ecology
- SH3_4 Geographical information systems, cartography
- SH3_5 Human and social geography
- SH3_6 Spatial and regional planning
- SH3_7 Population dynamics
- SH3_8 Urbanization and urban planning, cities
- SH3_9 Mobility and transportation

SH4 The Human Mind and its complexity: cognition, psychology, linguistics, philosophy and education

- SH4_1 Evolution of mind and cognitive functions, animal communication
- SH4_2 Human life-span development
- SH4_3 Neuropsychology and cognitive psychology
- SH4_4 Clinical and experimental psychology,
- SH4_5 Formal, cognitive, functional and computational linguistics
- SH4_6 Typological, historical and comparative linguistics
- SH4_7 Acquisition and knowledge of language: psycholinguistics, neurolinguistics
- SH4_8 Use of language: pragmatics, sociolinguistics, discourse analysis
- SH4_9 second language teaching and learning, language pathologies, lexicography,

terminology

SH4_10 Philosophy, history of philosophy

SH4_11 Epistemology, logic, philosophy of science

SH4_12 Ethics and morality, bioethics

SH4_13 Education: principles, techniques, typologies

SH5 Cultures and cultural production: literature, visual and performing arts, music, cultural and comparative studies

SH5_1 Classics

SH5_2 History of literature

SH5_3 Literary theory and comparative literature, literary styles

SH5_4 Textual philology and palaeography

SH5_5 Visual arts

SH5_6 Performing arts

SH5_7 Museums and exhibitions

SH5_8 Numismatics, epigraphy

SH5_9 Music and musicology, history of music

SH5_10 History of art and architecture

SH5_11 Cultural studies, cultural diversity

SH5_12 Cultural memory, intangible cultural heritage

SH6 The study of the human past: archaeology, history and memory

SH6_1 Archaeology, archaeometry, landscape archaeology

SH6_2 Prehistory and protohistory

SH6_3 Ancient history, ancient cultures

SH6_4 Medieval history

SH6_5 Modern and contemporary history

SH6_6 Colonial history, entangled histories, global history

SH6_7 Military history,

SH6_8 Historiography, theory and methods of history

SH6_9 History of ideas, intellectual history

SH6_10 Social, economic, cultural and political history

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SH6_11 Collective memories, identities, lieux de mémoire, oral history

SH6_12 Cultural heritage

Mathematics, physical sciences, information and communication, engineering, universe and earth sciences

PE1 Mathematical foundations: all areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics

PE1_1 Logic and foundations

PE1_2 Algebra

PE1_3 Number theory

PE1_4 Algebraic and complex geometry

PE1_5 Geometry

PE1_6 Topology

PE1_7 Lie groups, Lie algebras

PE1_8 Analysis

PE1_9 Operator algebras and functional analysis

PE1_10 ODE and dynamical systems

PE1_11 Partial differential equations

PE1_12 Mathematical physics

PE1_13 Probability and statistics

PE1_14 Combinatorics

PE1_15 Mathematical aspects of computer science

PE1_16 Numerical analysis and scientific computing

PE1_17 Control theory and optimization

PE1_18 Application of mathematics in sciences

PE2 Fundamental constituents of matter: particle, nuclear, plasma, atomic, molecular, gas, and optical physics

PE2_1 Fundamental interactions and fields

PE2_2 Particle physics

PE2_3 Nuclear physics

PE2_4 Nuclear astrophysics

PE2_5 Gas and plasma physics

PE2_6 Electromagnetism

PE2_7 Atomic, molecular physics

PE2_8 Optics and quantum optics

PE2_9 Lasers and laser physics

PE2_10 Acoustics

PE2_11 Relativity

PE2_12 Classical physics

PE2_13 Thermodynamics

PE2_14 Non-linear physics

PE2_15 General physics

PE2_16 Metrology and measurement

PE2_17 Statistical physics (gases)

PE3 Condensed matter physics: structure, electronic properties, fluids, nanosciences

PE3_1 Structure of solids and liquids

PE3_2 Mechanical and acoustical properties of condensed matter

PE3_3 Thermal properties of condensed matter

PE3_4 Transport properties of condensed matter,

PE3_5 Electronic properties of materials and transport

PE3_6 Lattice dynamics

PE3_7 Semiconductors

PE3_8 Superconductivity

PE3_9 Superfluids

PE3_10 Spintronics

PE3_11 Magnetism

PE3_12 Nanophysics: nanoelectronics, nanophotonics, nanomagnetism

PE3_13 Mesoscopic physics

PE3_14 Molecular electronics

PE3_15 Soft condensed matter (liquid crystals...)

PE3_16 Fluid dynamics (physics)

PE3_17 Statistical physics (condensed matter)

PE3_18 Phase transitions, phase equilibria

PE3_19 Biophysics

PE4 Physical and Analytical Chemical sciences: analytical chemistry, chemical theory, physical chemistry/chemical physics

PE4_1 Physical chemistry

PE4_2 Nanochemistry

PE4_3 Spectroscopic and spectrometric techniques

PE4_4 Molecular architecture and Structure

PE4_5 Surface science

PE4_6 Analytical chemistry

PE4_7 Chemical physics

PE4_8 Chemical instrumentation

PE4_9 Electrochemistry, electrodialysis, microfluidics

PE4_10 Combinatorial chemistry

PE4_11 Method development in chemistry

PE4_12 Catalysis

PE4_13 Physical chemistry of biological systems

PE4_14 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions

PE4_15 Theoretical and computational chemistry

PE4_16 Radiation chemistry

PE4_17 Nuclear chemistry
PE4_18 Photochemistry

PE5 Materials and Synthesis: materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry

PE5_1 Structural properties of materials
PE5_2 Solid state materials
PE5_3 Surface modification
PE5_4 Thin films
PE5_5 Corrosion
PE5_6 Porous materials
PE5_7 Ionic liquids
PE5_8 New materials: oxides, alloys, composite, organic-inorganic hybrid, superconductors
PE5_9 Materials for sensors
PE5_10 Nanomaterials : nanoparticles, nanotubes
PE5_11 Biomaterials synthesis
PE5_12 Intelligent materials – self assembled materials
PE5_13 Environment chemistry
PE5_14 Coordination chemistry
PE5_15 Colloid chemistry
PE5_16 Biological chemistry
PE5_17 Chemistry of condensed matter
PE5_18 Homogeneous and heterogeneous catalysis
PE5_19 Characterization methods of materials
PE5_20 Macromolecular chemistry,
PE5_21 Polymer chemistry
PE5_22 Supramolecular chemistry
PE5_23 Organic chemistry
PE5_24 Molecular chemistry

PE6 Computer science and informatics: informatics and information systems, computer science, scientific computing, intelligent systems

PE6_1 Computer architecture
PE6_2 Database management
PE6_3 Formal methods
PE6_4 Graphics and image processing
PE6_5 Human computer interaction and interface
PE6_6 Informatics and information systems
PE6_7 Theoretical computer science including quantum information
PE6_8 Intelligent systems
PE6_9 Scientific computing
PE6_10 Modelling tools
PE6_11 Multimedia
PE6_12 Parallel and Distributed Computing
PE6_13 Speech recognition
PE6_14 Systems and software

PE7 Systems and communication engineering: electronic, communication, optical and systems engineering

PE7_1 Control engineering
PE7_2 Electrical and electronic engineering: semiconductors, components, systems
PE7_4 Simulation engineering and modelling
PE7_5 Systems engineering, sensorics, actorics, automation
PE7_6 Micro- and nanoelectronics, optoelectronics
PE7_7 Communication technology, high-frequency technology
PE7_8 Signal processing
PE7_9 Networks
PE7_10 Man-machine-interfaces
PE7_11 Robotics

PE8 Products and process engineering: product design, process design and control, construction methods, civil engineering, energy systems, material engineering

- PE8_1 Aerospace engineering
- PE8_2 Chemical engineering, technical chemistry
- PE8_3 Civil engineering, maritime/hydraulic engineering, geotechnics, waste treatment
- PE8_4 Computational engineering
- PE8_5 Fluid mechanics, hydraulic-, turbo-, and piston engines
- PE8_6 Energy systems (production, distribution, application)
- PE8_7 Micro(system) engineering,
- PE8_8 Mechanical and manufacturing engineering (shaping, mounting, joining, separation)
- PE8_9 Materials engineering (biomaterials, metals, ceramics, polymers, composites, ...)
- PE8_10 Production technology, process engineering
- PE8_11 Product design, ergonomics, man-machine interfaces
- PE8_12 Lightweight construction, textile technology
- PE8_13 Industrial bioengineering
- PE8_14 Industrial biofuel production

PE9 Universe sciences: astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology; space science, instrumentation

- PE9_1 Solar and interplanetary physics
- PE9_2 Planetary systems sciences
- PE9_3 Interstellar medium
- PE9_4 Formation of stars and planets
- PE9_5 Astrobiology
- PE9_6 Stars and stellar systems
- PE9_7 The Galaxy
- PE9_8 Formation and evolution of galaxies
- PE9_9 Clusters of galaxies and large scale structures
- PE9_10 High energy and particles astronomy – X-rays, cosmic rays, gamma rays, neutrinos
- PE9_11 Relativistic astrophysics
- PE9_12 Dark matter, dark energy
- PE9_13 Gravitational astronomy
- PE9_14 Cosmology
- PE9_15 Space Sciences
- PE9_16 Very large data bases: archiving, handling and analysis
- PE9_17 Instrumentation - telescopes, detectors and techniques
- PE9_18 Solar planetology

PE10 Earth system science: physical geography, geology, geophysics, meteorology, oceanography, climatology, ecology, global environmental change, biogeochemical cycles, natural resources management

- PE10_1 Atmospheric chemistry, atmospheric composition, air pollution
- PE10_2 Meteorology, atmospheric physics and dynamics
- PE10_3 Climatology and climate change
- PE10_4 Terrestrial ecology, land cover change,
- PE10_5 Geology, tectonics, volcanology,
- PE10_6 Paleoclimatology, paleoecology
- PE10_7 Physics of earth's interior, seismology, volcanology
- PE10_8 Oceanography (physical, chemical, biological)
- PE10_9 Biogeochemistry, biogeochemical cycles, environmental chemistry
- PE10_10 Mineralogy, petrology, igneous petrology, metamorphic petrology
- PE10_11 Geochemistry, crystal chemistry, isotope geochemistry, thermodynamics,
- PE10_13 Sedimentology, soil science, palaeontology, earth evolution
- PE10_14 Physical geography
- PE10_15 Earth observations from space/remote sensing
- PE10_16 Geomagnetism, paleomagnetism
- PE10_17 Ozone, upper atmosphere, ionosphere
- PE10_18 Hydrology, water and soil pollution

Life Sciences

LS1 Molecular and Structural Biology and Biochemistry: molecular biology, biochemistry, biophysics, structural biology, biochemistry of signal transduction

- LS1_1 Molecular biology and interactions
- LS1_2 General biochemistry and metabolism
- LS1_3 DNA biosynthesis, modification, repair and degradation
- LS1_4 RNA synthesis, processing, modification and degradation
- LS1_5 Protein synthesis, modification and turnover
- LS1_6 Biophysics
- LS1_7 Structural biology (crystallography, NMR, EM)
- LS1_8 Biochemistry of signal transduction

LS2 Genetics, Genomics, Bioinformatics and Systems Biology: genetics, population genetics, molecular genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology

- LS2_1 Genomics, comparative genomics, functional genomics
- LS2_2 Transcriptomics
- LS2_3 Proteomics
- LS2_4 Metabolomics
- LS2_5 Glycomics
- LS2_6 Molecular genetics, reverse genetics and RNAi
- LS2_7 Quantitative genetics
- LS2_8 Epigenetics and gene regulation
- LS2_9 Genetic epidemiology
- LS2_10 Bioinformatics
- LS2_11 Computational biology
- LS2_12 Biostatistics
- LS2_13 Systems biology
- LS2_14 Biological systems analysis, modelling and simulation

LS3 Cellular and Developmental Biology: cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals

- LS3_1 Morphology and functional imaging of cells
- LS3_2 Cell biology and molecular transport mechanisms
- LS3_3 Cell cycle and division
- LS3_4 Apoptosis
- LS3_5 Cell differentiation, physiology and dynamics
- LS3_6 Organelle biology
- LS3_7 Cell signalling and cellular interactions
- LS3_8 Signal transduction
- LS3_9 Development, developmental genetics, pattern formation and embryology in animals
- LS3_10 Development, developmental genetics, pattern formation and embryology in plants
- LS3_11 Cell genetics
- LS3_12 Stem cell biology

LS4 Physiology, Pathophysiology and Endocrinology: organ physiology, pathophysiology, endocrinology, metabolism, ageing, regeneration, tumorigenesis, cardiovascular disease, metabolic syndrome

- LS4_1 Organ physiology
- LS4_2 Comparative physiology
- LS4_3 Endocrinology
- LS4_4 Ageing
- LS4_5 Metabolism, biological basis of metabolism related disorders
- LS4_6 Cancer and its biological basis
- LS4_7 Cardiovascular diseases
- LS4_8 Non-communicable diseases (except for neural/psychiatric, immunity-related,

metabolism-related disorders, cancer and cardiovascular diseases)

LS5 Neurosciences and neural disorders: neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological disorders, psychiatry

LS5_1 Neuroanatomy and neurosurgery

LS5_2 Neurophysiology

LS5_3 Neurochemistry and neuropharmacology

LS5_4 Sensory systems (e.g. visual system, auditory system)

LS5_5 Mechanisms of pain

LS5_6 Developmental neurobiology

LS5_7 Cognition (e.g. learning, memory, emotions, speech)

LS5_8 Behavioral neuroscience (e.g. sleep, consciousness, handedness)

LS5_9 Systems neuroscience

LS5_10 Neuroimaging and computational neuroscience

LS5_11 Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease)

LS5_12 Psychiatric disorders (e.g. schizophrenia, autism, Tourette's syndrome, obsessive compulsive disorder, depression, bipolar disorder, attention deficit hyperactivity disorder)

LS6 Immunity and infection: immunobiology, aetiology of immune disorders, microbiology, virology, parasitology, global and other infectious diseases, population dynamics of infectious diseases, veterinary medicine

LS6_1 Innate immunity

LS6_2 Adaptive immunity

LS6_3 Phagocytosis and cellular immunity

LS6_4 Immunosignalling

LS6_5 Immunological memory and tolerance

LS6_6 Immunogenetics

LS6_7 Microbiology

LS6_8 Virology

LS6_9 Bacteriology

LS6_10 Parasitology

LS6_11 Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide)

LS6_12 Biological basis of immunity related disorders

LS6_13 Veterinary medicine

LS7 Diagnostic tools, therapies and public health: aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics

LS7_1 Medical engineering and technology

LS7_2 Diagnostic tools (e.g. genetic, imaging)

LS7_3 Pharmacology, pharmacogenomics, drug discovery and design, drug therapy

LS7_4 Analgesia

LS7_5 Toxicology

LS7_6 Gene therapy, stem cell therapy, regenerative medicine

LS7_7 Surgery

LS7_8 Radiation therapy

LS7_9 Health services, health care research

LS7_10 Public health and epidemiology

LS7_11 Environment and health risks including radiation

LS7_12 Occupational medicine

LS7_13 Medical ethics

LS8 Evolutionary, population and environmental biology: evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, eco-toxicology, prokaryotic biology

LS8_1 Ecology (theoretical, community, population, microbial, evolutionary ecology)

LS8_2 Population biology, population dynamics, population genetics, plant-animal interactions

LS8_3 Systems eEvolution, biological adaptation, phylogenetics, systematics

LS8_4 Biodiversity, comparative biology

LS8_5 Conservation biology, ecology, genetics

LS8_6 Biogeography

LS8_7 Animal behaviour (behavioural ecology, animal communication)

LS8_8 Environmental and marine biology

LS8_9 Environmental toxicology

LS8_10 Prokaryotic biology

LS8_11 Symbiosis

LS9 Applied life sciences and biotechnology: agricultural, animal, fishery, forestry and food sciences; biotechnology, chemical biology, genetic engineering, synthetic biology, industrial biosciences; environmental biotechnology and remediation

LS9_1 Genetic engineering, transgenic organisms, recombinant proteins, biosensors

LS9_2 Synthetic biology and new bio-engineering concepts

LS9_3 Agriculture related to animal husbandry, dairying, livestock raising

LS9_4 Aquaculture, fisheries

LS9_5 Agriculture related to crop production, soil biology and cultivation, applied plant biology