



**EuroHPC**  
Joint Undertaking

# EUROHPC JU AND THE ERC PEER REVIEW EVALUATION PANELS

For the planning and operation of the evaluation of EuroHPC JU awards proposals, the ERC panel structure applies.

There are 28 ERC panels to cover all fields of science, assigned to three research domains: Physical Sciences and Engineering (11 Panels, PE1–PE11), Life Sciences (9 Panels, LS1–LS9), and Social Sciences and Humanities (8 Panels, SH1–SH8).

The panel names are accompanied by a list of panel descriptors (i.e. ERC keywords) indicating the fields of research covered by the respective ERC panels. The panel descriptors must always be read in the overall context of the panel's titles and sub-titles.

## PHYSICAL SCIENCES AND ENGINEERING

### **PE1 Mathematics**

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 Lie groups, Lie algebras
- PE1\_6 Geometry and global analysis
- PE1\_7 Topology
- PE1\_8 Analysis
- PE1\_9 Operator algebras and functional analysis
- PE1\_10 ODE and dynamical systems
- PE1\_11 Theoretical aspects of partial differential equations
- PE1\_12 Mathematical physics
- PE1\_13 Probability
- PE1\_14 Mathematical statistics
- PE1\_15 Generic statistical methodology and modelling
- PE1\_16 Discrete mathematics and combinatorics
- PE1\_17 Mathematical aspects of computer science
- PE1\_18 Numerical analysis
- PE1\_19 Scientific computing and data processing
- PE1\_20 Control theory, optimisation and operational research

- PE1\_21 Application of mathematics in sciences
- PE1\_22 Application of mathematics in industry and society

## **PE2 Fundamental Constituents of Matter**

Particle, nuclear, plasma, atomic, molecular, gas, and optical physics

- PE2\_1 Theory of fundamental interactions
- PE2\_2 Phenomenology of fundamental interactions
- PE2\_3 Experimental particle physics with accelerators
- PE2\_4 Experimental particle physics without accelerators
- PE2\_5 Classical and quantum physics of gravitational interactions
- PE2\_6 Nuclear, hadron and heavy ion physics
- PE2\_7 Nuclear and particle astrophysics
- PE2\_8 Gas and plasma physics
- PE2\_9 Electromagnetism
- PE2\_10 Atomic, molecular physics
- PE2\_11 Ultra-cold atoms and molecules
- PE2\_12 Optics, non-linear optics and nano-optics
- PE2\_13 Quantum optics and quantum information
- PE2\_14 Lasers, ultra-short lasers and laser physics
- PE2\_15 Thermodynamics
- PE2\_16 Non-linear physics
- PE2\_17 Metrology and measurement
- PE2\_18 Equilibrium and non-equilibrium statistical mechanics: steady states and dynamics

## **PE3 Condensed Matter Physics**

Structure, electronic properties, fluids, nanosciences, biological physics

- PE3\_1 Structure of solids, material growth and characterisation
- PE3\_2 Mechanical and acoustical properties of condensed matter, lattice dynamics
- PE3\_3 Transport properties of condensed matter
- PE3\_4 Electronic properties of materials, surfaces, interfaces, nanostructures
- PE3\_5 Physical properties of semiconductors and insulators
- PE3\_6 Macroscopic quantum phenomena, e.g. superconductivity, superfluidity, quantum Hall effect
- PE3\_7 Spintronics
- PE3\_8 Magnetism and strongly correlated systems
- PE3\_9 Condensed matter – beam interactions (photons, electrons, etc.)
- PE3\_10 Nanophysics, e.g. nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics
- PE3\_11 Mesoscopic quantum physics and solid-state quantum technologies
- PE3\_12 Molecular electronics
- PE3\_13 Structure and dynamics of disordered systems, e.g. soft matter (gels, colloids, liquid crystals), granular matter, liquids, glasses, defects
- PE3\_14 Fluid dynamics (physics)
- PE3\_15 Statistical physics: phase transitions, condensed matter systems, models of complex systems, interdisciplinary applications
- PE3\_16 Physics of biological systems

## **PE4 Physical and Analytical Chemical Sciences**

Analytical chemistry, chemical theory, physical chemistry/chemical physics

- PE4\_1 Physical chemistry
- PE4\_2 Spectroscopic and spectrometric techniques
- PE4\_3 Molecular architecture and Structure
- PE4\_4 Surface science and nanostructures
- PE4\_5 Analytical chemistry
- PE4\_6 Chemical physics
- PE4\_7 Chemical instrumentation
- PE4\_8 Electrochemistry, electrodialysis, microfluidics, sensors
- PE4\_9 Method development in chemistry
- PE4\_10 Heterogeneous catalysis
- PE4\_11 Physical chemistry of biological systems
- PE4\_12 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
- PE4\_13 Theoretical and computational chemistry
- PE4\_14 Radiation and Nuclear chemistry
- PE4\_15 Photochemistry
- PE4\_16 Corrosion
- PE4\_17 Characterisation methods of materials
- PE4\_18 Environment chemistry

## **PE5 Synthetic Chemistry and Materials**

New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry

- PE5\_1 Structural properties of materials
- PE5\_2 Solid state materials chemistry
- PE5\_3 Surface modification
- PE5\_4 Thin films
- PE5\_5 Ionic liquids
- PE5\_6 New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
- PE5\_7 Biomaterials synthesis
- PE5\_8 Intelligent materials synthesis – self assembled materials
- PE5\_9 Coordination chemistry
- PE5\_10 Colloid chemistry
- PE5\_11 Biological chemistry and chemical biology
- PE5\_12 Chemistry of condensed matter
- PE5\_13 Homogeneous catalysis
- PE5\_14 Macromolecular chemistry
- PE5\_15 Polymer chemistry
- PE5\_16 Supramolecular chemistry
- PE5\_17 Organic chemistry
- PE5\_18 Medicinal chemistry

## **PE6 Computer Science and Informatics**

Informatics and information systems, computer science, scientific computing, intelligent systems

- PE6\_1 Computer architecture, embedded systems, operating systems

PE6\_2 Distributed systems, parallel computing, sensor networks, cyber-physical systems  
PE6\_3 Software engineering, programming languages and systems  
PE6\_4 Theoretical computer science, formal methods, automata  
PE6\_5 Security, privacy, cryptology, quantum cryptography  
PE6\_6 Algorithms and complexity, distributed, parallel and network algorithms, algorithmic game theory  
PE6\_7 Artificial intelligence, intelligent systems, natural language processing  
PE6\_8 Computer graphics, computer vision, multimedia, computer games  
PE6\_9 Human computer interaction and interface, visualisation  
PE6\_10 Web and information systems, data management systems, information retrieval and digital libraries, data fusion  
PE6\_11 Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)  
PE6\_12 Scientific computing, simulation and modelling tools  
PE6\_13 Bioinformatics, bio-inspired computing, and natural computing  
PE6\_14 Quantum computing (formal methods, algorithms and other computer science aspects)

### **PE7 Systems and Communication Engineering**

Electrical, electronic, communication, optical and systems engineering

PE7\_1 Control engineering  
PE7\_2 Electrical engineering: power components and/or systems  
PE7\_3 Simulation engineering and modelling  
PE7\_4 (Micro- and nano-) systems engineering  
PE7\_5 (Micro- and nano-) electronic, optoelectronic and photonic components  
PE7\_6 Communication systems, wireless technology, high-frequency technology  
PE7\_7 Signal processing  
PE7\_8 Networks, e.g. communication networks and nodes, Internet of Things, sensor networks, networks of robots  
PE7\_9 Man-machine interfaces  
PE7\_10 Robotics  
PE7\_11 Components and systems for applications (in e.g. medicine, biology, environment)  
PE7\_12 Electrical energy production, distribution, applications

### **PE8 Products and Processes Engineering**

Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods

PE8\_1 Aerospace engineering  
PE8\_2 Chemical engineering, technical chemistry  
PE8\_3 Civil engineering, architecture, offshore construction, lightweight construction, geotechnics  
PE8\_4 Computational engineering  
PE8\_5 Fluid mechanics  
PE8\_6 Energy processes engineering  
PE8\_7 Mechanical engineering  
PE8\_8 Propulsion engineering, e.g. hydraulic, turbo, piston, hybrid engines  
PE8\_9 Production technology, process engineering  
PE8\_10 Manufacturing engineering and industrial design  
PE8\_11 Environmental engineering, e.g. sustainable design, waste and water treatment, recycling,

regeneration or recovery of compounds, carbon capture & storage

PE8\_12 Naval/marine engineering

PE8\_13 Industrial bioengineering

PE8\_14 Automotive and rail engineering; multi-/inter-modal transport engineering

### **PE9 Universe Sciences**

Astro-physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic astronomy; cosmology; space sciences; astronomical instrumentation and data

PE9\_1 Solar physics – the Sun and the heliosphere

PE9\_2 Solar system science

PE9\_3 Exoplanetary science, formation and characterization of extrasolar planets

PE9\_4 Astrobiology

PE9\_5 Interstellar medium and star formation

PE9\_6 Stars – stellar physics, stellar systems

PE9\_7 The Milky Way

PE9\_8 Galaxies – formation, evolution, clusters

PE9\_9 Cosmology and large-scale structure, dark matter, dark energy

PE9\_10 Relativistic astrophysics and compact objects

PE9\_11 Gravitational wave astronomy

PE9\_12 High-energy and particle astronomy

PE9\_13 Astronomical instrumentation and data, e.g. telescopes, detectors, techniques, archives, analyses

### **PE10 Earth System Science**

Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, 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 Palaeoclimatology, palaeoecology

PE10\_7 Physics of earth's interior, seismology, geodynamics

PE10\_8 Oceanography (physical, chemical, biological, geological)

PE10\_9 Biogeochemistry, biogeochemical cycles, environmental chemistry

PE10\_10 Mineralogy, petrology, igneous petrology, metamorphic petrology

PE10\_11 Geochemistry, cosmochemistry, crystal chemistry, isotope geochemistry, thermodynamics

PE10\_12 Sedimentology, soil science, palaeontology, earth evolution

PE10\_13 Physical geography, geomorphology

PE10\_14 Earth observations from space/remote sensing

PE10\_15 Geomagnetism, palaeomagnetism

PE10\_16 Ozone, upper atmosphere, ionosphere

PE10\_17 Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution

PE10\_18 Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets

PE10\_19 Planetary geology and geophysics

PE10\_20 Geohazards

PE10\_21 Earth system modelling and interactions

### **PE11 Materials Engineering**

Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.

PE11\_1 Engineering of biomaterials, biomimetic, bioinspired and bio-enabled materials

PE11\_2 Engineering of metals and alloys

PE11\_3 Engineering of ceramics and glasses

PE11\_4 Engineering of polymers and plastics

PE11\_5 Engineering of composites and hybrid materials

PE11\_6 Engineering of carbon materials

PE11\_7 Engineering of metal oxides

PE11\_8 Engineering of alternative established or emergent materials

PE11\_9 Nanomaterials engineering, e.g. nanoparticles, nanoporous materials, 1D & 2D nanomaterials

PE11\_10 Soft materials engineering, e.g. gels, foams, colloids

PE11\_11 Porous materials engineering, e.g. covalent-organic, metal-organic, porous aromatic frameworks

PE11\_12 Semi-conducting and magnetic materials engineering

PE11\_13 Metamaterials engineering

PE11\_14 Computational methods for materials engineering

## LIFE SCIENCES

### **LS1 Molecules of Life: Biological Mechanisms, Structures and Functions**

For all organisms: Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling

LS1\_1 Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates

LS1\_2 Biochemistry

LS1\_3 DNA and RNA biology

LS1\_4 Protein biology

LS1\_5 Lipid biology

LS1\_6 Glycobiology

LS1\_7 Molecular biophysics, biomechanics, bioenergetics

LS1\_8 Structural biology

LS1\_9 Molecular mechanisms of signalling processes

LS1\_10 Synthetic biology

LS1\_11 Chemical biology

LS1\_12 Protein design

LS1\_13 Early translational research and drug design

LS1\_14 Innovative methods and modelling in molecular, structural and synthetic biology

### **LS2 Integrative Biology: from Genes and Genomes to Systems**

For all organisms:

Genetics, epigenetics, genomics and other 'omics studies, bioinformatics, systems biology, genetic

diseases, gene editing, innovative methods and modelling, 'omics for personalised medicine

- LS2\_1 Genetics
- LS2\_2 Gene editing
- LS2\_3 Epigenetics
- LS2\_4 Gene regulation
- LS2\_5 Genomics
- LS2\_6 Metagenomics
- LS2\_7 Transcriptomics
- LS2\_8 Proteomics
- LS2\_9 Metabolomics
- LS2\_10 Glycomics/Lipidomics
- LS2\_11 Bioinformatics and computational biology
- LS2\_12 Biostatistics
- LS2\_13 Systems biology
- LS2\_14 Genetic diseases
- LS2\_15 Integrative biology for personalised medicine
- LS2\_16 Innovative methods and modelling in integrative biology

### **LS3 Cell Biology, Development, Stem Cells and Regeneration**

For all organisms:

Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches

- LS3\_1 Cell cycle, cell division and growth
- LS3\_2 Cell senescence, cell death, autophagy, cell ageing
- LS3\_3 Cell behaviour, including control of cell shape, cell migration
- LS3\_4 Cell junctions, cell adhesion, the extracellular matrix, cell communication
- LS3\_5 Cell signalling and signal transduction, exosome biology
- LS3\_6 Organelle biology and trafficking
- LS3\_7 Mechanobiology of cells, tissues and organs
- LS3\_8 Embryogenesis, pattern formation, morphogenesis
- LS3\_9 Cell differentiation, formation of tissues and organs
- LS3\_10 Developmental genetics
- LS3\_11 Evolution of developmental strategies
- LS3\_12 Organoids
- LS3\_13 Stem cells
- LS3\_14 Regeneration
- LS3\_15 Development of cell-based therapeutic approaches for tissue regeneration
- LS3\_16 Functional imaging of cells and tissues
- LS3\_17 Theoretical modelling in cellular, developmental and regenerative biology

### **LS4 Physiology in Health, Disease and Ageing**

Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, interorgan and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases)

- LS4\_1 Organ and tissue physiology and pathophysiology
- LS4\_2 Comparative physiology
- LS4\_3 Physiology of ageing
- LS4\_4 Endocrinology
- LS4\_5 Non-hormonal mechanisms of inter-organ and tissue communication
- LS4\_6 Microbiome and host physiology
- LS4\_7 Nutrition and exercise physiology
- LS4\_8 Impact of stress (including environmental stress) on physiology
- LS4\_9 Metabolism and metabolic disorders, including diabetes and obesity
- LS4\_10 The cardiovascular system and cardiovascular diseases
- LS4\_11 Haematopoiesis and blood diseases
- LS4\_12 Cancer
- LS4\_13 Other non-communicable diseases (except disorders of the nervous system and immunity-related diseases)

### **LS5 Neuroscience and Disorders of the Nervous System**

Nervous system development, homeostasis and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders – In humans and all other organisms

- LS5\_1 Neuronal cells
- LS5\_2 Glial cells and neuronal-glia communication
- LS5\_3 Neural development and related disorders
- LS5\_4 Neural stem cells
- LS5\_5 Neural networks and plasticity
- LS5\_6 Neurovascular biology and blood-brain barrier
- LS5\_7 Sensory systems, sensation and perception, including pain
- LS5\_8 Neural basis of behaviour (e.g. sleep, consciousness, addiction)
- LS5\_9 Neural basis of cognition (e.g. learning, memory, attention, emotions, speech)
- LS5\_10 Ageing of the nervous system
- LS5\_11 Neurological and neurodegenerative disorders
- LS5\_12 Mental disorders
- LS5\_13 Nervous system injuries and trauma, stroke
- LS5\_14 Repair and regeneration of the nervous system
- LS5\_15 Neuroimmunology, neuroinflammation
- LS5\_16 Systems and computational neuroscience (e.g. modelling, simulation, brain oscillations, connectomics)
- LS5\_17 Imaging in neuroscience
- LS5\_18 Innovative methods and tools for neuroscience

### **LS6 Immunity, Infection and Immunotherapy**

The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies

- LS6\_1 Innate immunity
- LS6\_2 Adaptive immunity
- LS6\_3 Regulation of the immune response
- LS6\_4 Immune-related diseases



- LS6\_5 Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)
- LS6\_6 Infectious diseases
- LS6\_7 Mechanisms of infection
- LS6\_8 Biological basis of prevention and treatment of infection
- LS6\_9 Antimicrobials, antimicrobial resistance
- LS6\_10 Vaccine development
- LS6\_11 Innovative immunological tools and approaches, including therapies

### **LS7 Prevention, Diagnosis and Treatment of Human Diseases**

Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine

- LS7\_1 Medical imaging for prevention, diagnosis and monitoring of diseases
- LS7\_2 Medical technologies and tools (including genetic tools and biomarkers) for prevention, diagnosis, monitoring and treatment of diseases
- LS7\_3 Nanomedicine
- LS7\_4 Regenerative medicine
- LS7\_5 Applied gene, cell and immune therapies
- LS7\_6 Other medical therapeutic interventions, including transplantation
- LS7\_7 Pharmacology and toxicology
- LS7\_8 Effectiveness of interventions, including resistance to therapies
- LS7\_9 Public health and epidemiology
- LS7\_10 Preventative and prognostic medicine
- LS7\_11 Environmental health, occupational medicine
- LS7\_12 Health care, including care for the ageing population
- LS7\_13 Palliative medicine
- LS7\_14 Digital medicine, e-medicine, medical applications of artificial intelligence
- LS7\_15 Medical ethics

### **LS8 Environmental Biology, Ecology and Evolution**

For all organisms:

Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling

- LS8\_1 Ecosystem and community ecology, macroecology
- LS8\_2 Biodiversity
- LS8\_3 Conservation biology
- LS8\_4 Population biology, population dynamics, population genetics
- LS8\_5 Biological aspects of environmental change, including climate change
- LS8\_6 Evolutionary ecology
- LS8\_7 Evolutionary genetics
- LS8\_8 Phylogenetics, systematics, comparative biology
- LS8\_9 Macroevolution and paleobiology
- LS8\_10 Ecology and evolution of species interactions
- LS8\_11 Behavioural ecology and evolution
- LS8\_12 Microbial ecology and evolution
- LS8\_13 Marine biology and ecology
- LS8\_14 Ecophysiology, from organisms to ecosystems

LS8\_15 Theoretical developments and modelling in environmental biology, ecology, and evolution

### **LS9 Biotechnology and Biosystems Engineering**

Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards

- LS9\_1 Bioengineering for synthetic and chemical biology
- LS9\_2 Applied genetics, gene editing and transgenic organisms
- LS9\_3 Bioengineering of cells, tissues, organs and organisms
- LS9\_4 Microbial biotechnology and bioengineering
- LS9\_5 Food biotechnology and bioengineering
- LS9\_6 Marine biotechnology and bioengineering
- LS9\_7 Environmental biotechnology and bioengineering
- LS9\_8 Applied plant sciences, plant breeding, agroecology and soil biology
- LS9\_9 Plant pathology and pest resistance
- LS9\_10 Veterinary and applied animal sciences
- LS9\_11 Biomass production and utilisation, biofuels
- LS9\_12 Ecotoxicology, biohazards and biosafety

## **SOCIAL SCIENCES AND HUMANITIES**

### **SH1 Individuals, Markets and Organisations**

Economics, finance, management

- SH1\_1 Macroeconomics; monetary economics; economic growth, labour economics
- SH1\_2 International trade; international business; spatial economics
- SH1\_3 Development economics political economics
- SH1\_4 Finance; financial markets
- SH1\_5 Corporate finance; international finance
- SH1\_6 Banking, insurance
- SH1\_7 Accounting, asset prices, auditing
- SH1\_8 Econometrics, game theory, decision theory
- SH1\_9 Behavioural economics; experimental economics; neuro-economics
- SH1\_10 Microeconomics, industrial organisation, applied microeconomics
- SH1\_11 Innovation, research & development, entrepreneurship
- SH1\_12 Management; operations management, international management
- SH1\_13 Human resource management; organisational behaviour
- SH1\_14 Strategy, operation research
- SH1\_15 Marketing, consumer behaviour
- SH1\_16 Quantitative economic history, economic systems, institutional economics

### **SH2 Institutions, Governance and Legal Systems**

Political science, international relations, law

- SH2\_1 Political systems, governance
- SH2\_2 Democratisation and social movements
- SH2\_3 Conflict resolution, war, peace building
- SH2\_4 Legal studies, comparative law, law and economics

SH2\_5 Constitutions, human rights, international law  
SH2\_6 International relations, global and transnational governance  
SH2\_7 Humanitarian assistance and development  
SH2\_8 Political and legal philosophy  
SH2\_9 Digital approaches to political science and law

### **SH3 The Social World and Its Interactions**

Sociology, social psychology, education sciences, communication studies

SH3\_1 Social structure, social mobility, social innovation  
SH3\_2 Inequalities, discrimination, prejudice  
SH3\_3 Aggression and violence, antisocial behaviour, crime  
SH3\_4 Social integration, exclusion, prosocial behaviour  
SH3\_5 Social attitudes and beliefs  
SH3\_6 Social influence; power and group behaviour  
SH3\_7 Social policies, welfare, work and employment  
SH3\_8 Poverty and poverty alleviation  
SH3\_9 Social aspects of teaching and learning, curriculum studies, education and educational policies  
SH3\_10 Communication and information, networks, media  
SH3\_11 Digital social research  
SH3\_12 Social studies of science and technology

### **SH4 The Human Mind and Its Complexity**

Cognitive science, psychology, linguistics

SH4\_1 Cognitive basis of human development, developmental disorders; comparative cognition  
SH4\_2 Personality and social cognition; emotion  
SH4\_3 Clinical and health psychology  
SH4\_4 Neurocognitive psychology  
SH4\_5 Attention, perception, action, consciousness  
SH4\_6 Learning, memory; cognition in ageing  
SH4\_7 Reasoning, decision-making; intelligence  
SH4\_8 Language learning and processing (first and second languages)  
SH4\_9 Theoretical linguistics; computational linguistics  
SH4\_10 Language typology; historical linguistics  
SH4\_11 Pragmatics, sociolinguistics, linguistic anthropology, discourse analysis

### **SH5 Texts and Concepts**

Literary studies, literature, philosophy

SH5\_1 Classics, ancient literature  
SH5\_2 Theory and history of literature, comparative literature  
SH5\_3 Book studies  
SH5\_4 Philology; text and image studies  
SH5\_5 Palaeography and codicology  
SH5\_6 Philosophy of mind, philosophy of language  
SH5\_7 Philosophy of science, epistemology, logic  
SH5\_8 Metaphysics, philosophical anthropology; aesthetics

SH5\_9 Ethics and its applications; social philosophy  
SH5\_10 History of philosophy  
SH5\_11 Digital humanities; digital approaches to literary studies and philosophy

## **SH6 The Study of the Human Past**

Archaeology and history

SH6\_1 Archaeological methods and theory, history of archaeology  
SH6\_2 Prehistoric archaeology, archaeology of non-literate societies  
SH6\_3 Archaeology of early literate societies and early civilizations  
SH6\_4 Medieval and post-medieval archaeologies  
SH6\_5 Archaeological science, bioarchaeology, environmental archaeology, geoarchaeology  
SH6\_6 Digital, computational, virtual and geospatial archaeologies  
SH6\_7 Historiography, theory and methods of history, including the analysis of digital data  
SH6\_8 Ancient history, medieval history  
SH6\_9 Early modern, modern, and contemporary history  
SH6\_10 Colonial and post-colonial history  
SH6\_11 Global, transnational, and comparative history  
SH6\_12 Social and economic history  
SH6\_13 Cultural history, intellectual history  
SH6\_14 History of science and technologies, environmental history

## **SH7 Human Mobility, Environment, and Space**

Human geography, demography, health, sustainability science, territorial planning, spatial analysis

SH7\_1 Human, economic and social geography  
SH7\_2 Migration  
SH7\_3 Population dynamics: households, family and fertility  
SH7\_4 Social aspects of health, ageing and society  
SH7\_5 Sustainability sciences, environment and resources, ecosystem services  
SH7\_6 Environmental and climate change, societal impact and policy  
SH7\_7 Cities; urban, regional and rural studies  
SH7\_8 Land use and planning  
SH7\_9 Energy, transportation and mobility  
SH7\_10 GIS, spatial analysis; digital geography

## **SH8 Studies of Cultures and Arts**

Social anthropology, studies of cultures, studies of arts

SH8\_1 Kinship; diversity and identities, gender, interethnic relations  
SH8\_2 Religious studies, ritual; symbolic representation  
SH8\_3 Cultural studies and theory, cultural identities and memories, cultural heritage  
SH8\_4 Museums, exhibitions, conservation and restoration  
SH8\_5 History of art and of architecture  
SH8\_6 Architecture, design, craft, creative industries  
SH8\_7 Music and musicology; history of music  
SH8\_8 Visual and performing arts, screen, arts-based research  
SH8\_9 Digital approaches to anthropology, cultural studies and art