### Panel structure for ERC calls 2021 and 2022

# (revised)

# **Physical Sciences and Engineering**

#### PE1 Mathematics

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 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 Cellular, Developmental and Regenerative Biology

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

- LS5 1 Neuronal cells
- LS5\_2 Glial cells and neuronal-glial 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
- LS5\_9 Neural basis of cognition
- 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
- 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
- SH1\_2 International trade; international management; international business; spatial economics
- SH1\_3 Development economics; structural change; political economy of development
- SH1\_4 Finance; asset pricing; international finance; market microstructure
- SH1 5 Corporate finance; banking and financial intermediation; accounting; auditing; insurance
- SH1\_6 Econometrics; operations research
- SH1\_7 Behavioural economics; experimental economics; neuro-economics
- SH1\_8 Microeconomic theory; game theory; decision theory
- SH1\_9 Industrial organisation; entrepreneurship; R&D and innovation
- SH1 10 Management; strategy; organisational behaviour
- SH1 11 Human resource management; operations management, marketing
- SH1\_12 Environmental economics; resource and energy economics; agricultural economics
- SH1 13 Labour and demographic economics
- SH1 14 Health economics; economics of education
- SH1\_15 Public economics; political economics; law and economics
- SH1\_16 Historical economics; quantitative economic history; institutional economics; economic systems

### 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, international law
- SH2\_4 Legal studies, constitutions, human rights, comparative law
- SH2\_5 International relations, global and transnational governance
- SH2 6 Humanitarian assistance and development
- SH2\_7 Political and legal philosophy
- SH2\_8 Big data in political and legal studies

#### SH3 The Social World and Its Diversity

Sociology, social psychology, social anthropology, 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 Attitudes and beliefs
- SH3\_6 Social influence; power and group behaviour
- SH3\_7 Kinship; diversity and identities, gender, interethnic relations
- SH3\_8 Social policies, welfare, work and employment
- SH3\_9 Poverty and poverty alleviation
- SH3\_10 Religious studies, ritual; symbolic representation
- SH3 11 Social aspects of teaching and learning, curriculum studies, education and educational policies
- SH3 12 Communication and information, networks, media
- SH3\_13 Digital social research
- SH3\_14 Social studies of science and technology

#### SH4 The Human Mind and Its Complexity

Cognitive science, psychology, linguistics, theoretical philosophy

SH4\_1 Cognitive basis of human development and education, developmental disorders; comparative cognition

- SH4\_2 Personality and social cognition; emotion
- SH4 3 Clinical and health psychology
- SH4\_4 Neuropsychology
- 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
- SH4 12 Philosophy of mind, philosophy of language
- SH4 13 Philosophy of science, epistemology, logic

#### SH5 Cultures and Cultural Production

Literary studies, cultural studies, study of the arts, philosophy

- SH5\_1 Classics, ancient literature and art
- SH5\_2 Theory and history of literature, comparative literature
- SH5 3 Philology; text and image studies
- SH5\_4 Visual and performing arts, film, design and architecture
- SH5\_5 Music and musicology; history of music
- SH5 6 History of art and architecture, arts-based research
- SH5 7 Museums, exhibitions, conservation and restoration
- SH5\_8 Cultural studies, cultural identities and memories, cultural heritage
- SH5\_9 Metaphysics, philosophical anthropology; aesthetics
- SH5\_10 Ethics and its applications; social philosophy
- SH5\_11 History of philosophy
- SH5 12 Computational modelling and digitisation in the cultural sphere

### SH6 The Study of the Human Past

Archaeology and history

- SH6 1 Historiography, theory and methods in history, including the analysis of digital data
- SH6 2 Classical archaeology, history of archaeology, social archaeology
- SH6\_3 General archaeology, archaeometry, landscape archaeology
- SH6\_4 Prehistory, palaeoanthropology, palaeodemography, protohistory, bioarchaeology
- SH6\_5 Palaeography and codicology
- SH6\_6 Ancient history
- SH6 7 Medieval history
- SH6\_8 Early modern history
- SH6\_9 Modern and contemporary history
- SH6\_10 Colonial and post-colonial history
- SH6\_11 Global history, transnational history, comparative history, entangled histories
- SH6\_12 Social and economic history
- SH6 13 Gender history, cultural history, history of collective identities and memories, history of religions
- SH6\_14 History of ideas, intellectual history, history of economic thought
- SH6\_15 History of science, medicine and technologies

#### 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
- SH7\_6 Environmental and climate change, societal impact and policy

- SH7\_7 Cities; urban, regional and rural studiesSH7\_8 Land use and planningSH7\_9 Energy, transportation and mobility

- SH7\_10 GIS, spatial analysis; big data in geographical studies