

## Allegato 1: Macroaree e aree scientifiche ERC

**Macroarea PE: Physical Sciences and Engineering**

**PE1 Mathematics:** All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics. **PE2 Fundamental Constituents of Matter:** Particle, nuclear, plasma, atomic, molecular, gas, and optical physics. **PE3 Condensed Matter Physics:** Structure, electronic properties, fluids, nanosciences, biophysics. **PE4 Physical and Analytical Chemical Sciences:** Analytical chemistry, chemical theory, physical chemistry/chemical physics. **PE5 Synthetic Chemistry and Materials:** Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry. **PE6 Computer Science and Informatics:** Informatics and information systems, computer science, scientific computing, intelligent systems. **PE7 Systems and Communication Engineering:** Electrical, electronic, communication, optical and systems engineering. **PE8 Products and Processes Engineering:** Product design, process design and control, construction methods, civil engineering, energy processes, material engineering. **PE9 Universe Sciences:** Astrophysics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary. **PE10 Earth System Science:** Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, ecology, global environmental change, biogeochemical cycles, natural resources management.

**Macroarea LS: Life Sciences**

**LS1 Molecular and Structural Biology and Biochemistry:** Molecular synthesis, modification and interaction, biochemistry, biophysics, structural biology, metabolism, signal transduction. **LS2 Genetics, Genomics, Bioinformatics and Systems Biology:** Molecular and population genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology. **LS3 Cellular and Developmental Biology:** Cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals, stem cell biology. **LS4 Physiology, Pathophysiology and Endocrinology:** Organ physiology, pathophysiology, endocrinology, metabolism, ageing, tumorigenesis, cardiovascular disease, metabolic syndrome. **LS5 Neurosciences and Neural Disorders:** Neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological and psychiatric disorders. **LS6 Immunity and Infection:** The immune system and related disorders, infectious agents and diseases, prevention and treatment of infection. **LS7 Diagnostics, Therapies, Applied Medical Technology and Public Health:** Aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics. **LS8 Evolutionary, Population and Environmental Biology:** Evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, microbial ecology. **LS9 Applied Life Sciences and Non- Medical Biotechnology:** Applied plant and animal sciences; food sciences; forestry; industrial, environmental and non-medical biotechnologies, nanobiotechnology, bioengineering; synthetic and chemical biology; biomimetics; bioremediation

**Macroarea SH: Social Sciences and Humanities**

**SH1 Individuals, Markets and Organisations:** Economics, finance and management. **SH2 Institutions, Values, Environment and Space:** Political science, law, sustainability science, geography, regional studies and planning. **SH3 The Social World, Diversity, Population:** Sociology, social psychology, demography, education, communication. **SH4**

**The Human Mind and Its Complexity:** Cognitive science, psychology, linguistics, philosophy of mind.  
**SH5 Cultures and Cultural Production:** Literature, philology, cultural studies, anthropology, study of the arts, philosophy. **SH6 The Study of the Human Past:** Archaeology and history.