

Goldwater Scholarship Fields of Study

The natural sciences, engineering, and mathematics fields and sub-fields used by the Goldwater Foundation to determine eligibility and for the application are those used by the National Science Foundation for its Graduate Research Fellowship Program.

CHEMISTRY

Artificial Intelligence
Chemical Catalysis
Chemical Measurement and Imaging
Chemical Structure, Dynamics, and Mechanism
Chemical Synthesis
Chemical Theory, Models and Computational Methods
Chemistry of Life Processes
Computationally Intensive Research
Environmental Chemical Systems
Macromolecular, Supramolecular, and Nanochemistry
Other (specify)
Quantum Information Science
Sustainable Chemistry

COMPUTER & INFORMATION SCIENCES & ENGINEERING

Algorithms and Theoretical Foundations
Artificial Intelligence
Bioinformatics and other Informatics
Communication and Information Theory
Computational Science and Engineering
Computationally Intensive Research
Computer Architecture
Computer Networks
Computer Security and Privacy
Computer Systems and Embedded Systems
Data Mining and Information Retrieval
Data Science
Databases
Formal Methods, Verification, and Programming Languages
Graphics and Visualization
Human Computer Interaction
Machine Learning
Natural Language Processing
Other (specify)
Quantum Computing and Communication
Quantum Information Science
Robotics and Computer Vision
Software Engineering

ENGINEERING

Aeronautical and Aerospace Engineering
Artificial Intelligence
Bioengineering
Biomedical Engineering
Chemical Engineering
Civil Engineering
Computationally Intensive Research
Computer Engineering
Electrical and Electronic Engineering
Energy Engineering
Environmental Engineering
Industrial Engineering & Operations Research
Manufacturing Engineering
Materials Engineering
Mechanical Engineering
Nuclear Engineering
Ocean Engineering
Optical Engineering
Other (specify)
Quantum Engineering
Quantum Information Science
Systems Engineering
Wireless Engineering

GEOSCIENCES

Aeronomy
Artificial Intelligence
Arctic-Antarctic
Atmospheric Chemistry
Biogeochemistry
Biological Oceanography
Chemical Oceanography
Climate and Large-Scale Atmospheric Dynamics
Computationally Intensive Research
Geobiology
Geochemistry
Geodynamics
Geomorphology
Geophysics
Glaciology
Hydrology
Magnetospheric Physics

Goldwater Scholarship Fields of Study

Marine Biology
Marine Geology and Geophysics
Other (specify)
Paleoclimate
Paleontology and Paleobiology
Petrology
Physical and Dynamic Meteorology
Physical Oceanography
Quantum Information Science
Sedimentary Geology
Solar Physics
Tectonics

LIFE SCIENCES

Artificial Intelligence
Biochemistry
Bioinformatics and Computational Biology
Biophysics
Cell Biology
Computationally Intensive Research
Developmental Biology
Ecology
Environmental Biology
Evolutionary Biology
Genetics
Genomics
Microbial Biology
Neurosciences
Organismal Biology
Other (specify)
Physiology
Proteomics
Quantum Information Science
Structural Biology
Systematics and Biodiversity
Systems and Molecular Biology

MATERIALS RESEARCH

Artificial Intelligence
Biomaterials
Ceramics
Chemistry of Materials
Computationally Intensive Research
Electronic Materials
Materials Theory
Metallic Materials
Other (specify)
Photonic Materials

Physics of Materials
Polymers
Quantum Information Science

MATHEMATICAL SCIENCES

Algebra, Number Theory, and Combinatorics
Analysis
Applied Mathematics
Artificial Intelligence
Biostatistics
Computational and Data-enabled Science
Computational Mathematics
Computational Statistics
Computationally Intensive Research
Geometric Analysis
Logic or Foundations of Mathematics
Mathematical Biology
Other (specify)
Probability
Quantum Information Science
Statistics
Topology

PHYSICS & ASTRONOMY

Artificial Intelligence
Astronomy and Astrophysics
Atomic, Molecular and Optical Physics
Computationally Intensive Research
Condensed Matter Physics
Nuclear Physics
Other (specify)
Particle Physics
Physics of Living Systems
Plasma Physics
Quantum Information Science
Solid State Physics
Theoretical Physics

PSYCHOLOGY

Artificial Intelligence
Cognitive Neuroscience
Cognitive Psychology
Comparative Psychology
Computational Psychology
Computationally Intensive Research
Developmental Psychology
Industrial/Organizational Psychology
Neuropsychology

Goldwater Scholarship Fields of Study

Other (specify)

Perception and Psychophysics

Personality and Individual Differences

Physiological Psychology

Psycholinguistics

Quantitative Psychology

Quantum Information Science

Social/Affective Neuroscience

Social Psychology

SOCIAL SCIENCES

Anthropology, other (specify)

Archaeology

Artificial Intelligence

Biological Anthropology

Communications

Computationally Intensive Research

Cultural Anthropology

Decision Making and Risk Analysis

Economics

Geography

History and Philosophy of Science

International Relations

Law and Social Science

Linguistic Anthropology

Linguistics

Medical Anthropology

Other (specify)

Political Science

Public Policy

Quantum Information Science

Science Policy

Sociology

Urban and Regional Planning

STEM EDUCATION AND LEARNING RESEARCH

Artificial Intelligence

Computationally Intensive Research

Engineering Education

Mathematics Education

Other (specify)

Quantum Information Science

Science Education

Technology Education