TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	86.9	0.15
Science	85.9	0.20
Biological, agricultural, and environmental life sciences	86.7	0.30
Agricultural and food sciences	81.1	1.25
Agricultural sciences	76.8	2.90
Animal sciences	86.3	2.00
Food sciences and technology	81.8	2.90
Plant sciences	78.0	2.45
Soil sciences	80.4	2.30
Biochemistry and biophysics	85.8	1.00
Biochemistry	84.9	1.10
Biophysics	89.8	1.65
Cell, cellular biology, and molecular biology	88.8	1.05
Microbiological sciences and immunology	86.8	1.10
Immunology	90.8	1.35
Microbiological sciences	84.6	1.45
Natural resources and conservation	81.8	1.55
Fish, fisheries, wildlife, and wildlands science and management	73.9	3.15
Forestry	79.4	3.55
Natural resource conservation, research, management, and policy	87.0	1.75
Zoology	73.2	2.00
Other biological sciences	88.5	0.40
Biomathematics, bioinformatics, and computational biology	94.1	1.15
Botany and plant biology	76.9	1.95
Epidemiology, ecology, and population biology	88.9	1.10
Genetics	90.6	1.60
Neurobiology and neuroscience	95.1	0.80
Nutrition sciences	84.8	1.80
Pharmacology and toxicology	87.6	1.30
Physiology, pathology, and related sciences	84.9	1.15
Biological and biomedical sciences, general	89.2	1.35
Biological and biomedical sciences, other	83.0	2.10
Computer and information sciences	91.2	0.70
Computer science	91.3	0.80
Information science, studies	86.0	2.45
Computer and information sciences, other	95.8	1.00
Mathematics and statistics	87.6	0.70
Applied mathematics	92.1	1.25
Mathematics	84.9	1.15
Statistics	88.8	1.55
Mathematics and statistics, other	87.7	1.80
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	85.6	0.45
Astronomy and astrophysics	90.2	1.35
Chemistry, except biochemistry	85.1	0.70
Inorganic chemistry	84.9	1.90
Organic chemistry	84.2	1.30
Chemistry, other, except biochemistry	85.5	0.80
Geosciences, atmospheric sciences, and ocean sciences	83.3	0.95
Atmospheric sciences and meteorology	89.4	0.95
Geological and earth sciences, geosciences	80.5	1.30

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Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2023

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	89.2	1.50
Oceanography, chemical and physical	83.3	2.40
Physics	87.2	0.90
Psychology	83.2	0.55
Clinical psychology	86.3	0.95
Counseling and applied psychology	84.7	1.45
Educational and school psychology	74.9	1.65
Industrial and organizational psychology	87.7	1.75
Research and experimental psychology	81.6	1.00
Psychology, general	84.6	2.35
Psychology, other	79.5	2.20
Social sciences	85.1	0.50
Economics	86.3	1.10
Political science and government	87.6	1.10
Political science and government	87.6	1.25
Public policy analysis	87.8	1.55
Sociology, demography, and population studies	83.4	1.25
Other social sciences	83.6	0.75
Anthropology	82.6	1.50
Area, ethnic, cultural, gender, and group studies	87.8	1.65
Geography and cartography	85.1	1.70
International relations and national security studies	84.0	2.55
Linguistics	84.8	2.25
Urban studies, affairs	77.4	2.80
Social sciences, other	82.3	1.35
Engineering	90.9	0.35
Aerospace, aeronautical, and astronautical engineering	93.5	1.10
Chemical engineering	90.3	1.15
Civil engineering	92.6	0.90
Electrical and computer engineering	92.3	0.55
Computer engineering	93.3	1.20
Electrical, electronics, and communications engineering	92.2	0.65
Mechanical engineering	90.2	1.20
Metallurgical and materials engineering	90.4	1.15
Other engineering	88.8	0.70
Agricultural engineering	78.9	2.85
Bioengineering and biomedical engineering	94.6	0.85
Engineering mechanics, physics, and science	85.9	2.25
Industrial and manufacturing engineering	84.5	1.55
Nuclear engineering	90.4	1.55
Engineering, other	85.7	2.00
Health	84.9	0.75
Communication disorders sciences and services	76.5	2.50
Hospital and medical administration services	82.9	2.45
Pharmacy, pharmaceutical sciences, and administration	90.6	1.30
Public health	90.9	1.35
Registered nursing, nursing administration, nursing research	76.2	1.65
Health sciences, other	86.4	1.65

SE = standard error.

Note(s):
Percentages are rounded to the nearest 0.1%. Standard errors of unrounded percentages (based on unrounded counts) are rounded up to the nearest multiple of 0.05%. Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Unemployed includes individuals who were not working during the survey reference week but had been seeking work in the prior 4 weeks or who were on layoff from their job. Population (P) is defined as all science, engineering, or health doctorate holders under age 76, residing in the United States during the week of 1 February 2023, who earned doctorates from U.S. institutions. Labor force participation rate (LFR) = (E + U) / P. Residence location is based on reported living location on 1 February 2023.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2023.