

TABLE 4-4

Labor force participation rate among non-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	91.1	0.50
Science	91.0	0.55
Biological, agricultural, and environmental life sciences	89.6	1.10
Agricultural and food sciences	83.3	2.30
Agricultural sciences	88.8	5.00
Animal sciences	75.1	5.20
Food sciences and technology	87.4	4.05
Plant sciences	82.2	4.90
Soil sciences	90.9	3.25
Biochemistry and biophysics	87.7	4.10
Biochemistry	89.9	4.00
Biophysics	75.2	14.95
Cell, cellular biology, and molecular biology	93.3	2.75
Microbiological sciences and immunology	93.8	2.95
Immunology	D	D
Microbiological sciences	90.9	4.20
Natural resources and conservation	91.3	2.20
Fish, fisheries, wildlife, and wildlands science and management	91.9	3.90
Forestry	84.6	4.65
Natural resource conservation, research, management, and policy	96.3	1.80
Zoology	80.8	7.15
Other biological sciences	91.8	1.50
Biomathematics, bioinformatics, and computational biology	99.3	0.70
Botany and plant biology	88.8	3.05
Epidemiology, ecology, and population biology	93.5	2.45
Genetics	93.6	4.00
Neurobiology and neuroscience	99.3	0.60
Nutrition sciences	94.1	2.85
Pharmacology and toxicology	84.1	9.80
Physiology, pathology, and related sciences	91.4	4.35
Biological and biomedical sciences, general	82.1	8.25
Biological and biomedical sciences, other	84.9	11.00
Computer and information sciences	93.6	1.45
Computer science	93.7	1.70
Information science, studies	88.4	4.55
Computer and information sciences, other	97.7	2.20
Mathematics and statistics	91.8	1.50
Applied mathematics	94.1	3.10
Mathematics	93.4	1.85
Statistics	88.0	5.25
Mathematics and statistics, other	85.9	5.00
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	91.9	1.15
Astronomy and astrophysics	91.3	3.65
Chemistry, except biochemistry	88.9	2.65
Inorganic chemistry	93.2	4.90
Organic chemistry	88.1	5.25
Chemistry, other, except biochemistry	88.3	3.15
Geosciences, atmospheric sciences, and ocean sciences	92.5	1.20
Atmospheric sciences and meteorology	96.0	1.60
Geological and earth sciences, geosciences	92.7	1.70

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Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	84.6	5.20
Oceanography, chemical and physical	91.7	3.75
Physics	94.2	1.65
Psychology	89.8	2.25
Clinical psychology	94.3	3.75
Counseling and applied psychology	88.8	6.55
Educational and school psychology	84.0	6.65
Industrial and organizational psychology	94.8	3.95
Research and experimental psychology	90.0	3.55
Psychology, general	84.5	11.30
Psychology, other	91.8	6.10
Social sciences	91.3	1.05
Economics	92.4	1.50
Political science and government	93.3	2.85
Political science and government	94.0	3.30
Public policy analysis	90.5	4.70
Sociology, demography, and population studies	92.7	2.55
Other social sciences	88.6	1.70
Anthropology	88.7	3.00
Area, ethnic, cultural, gender, and group studies	94.3	4.10
Geography and cartography	87.7	4.85
International relations and national security studies	97.7	1.90
Linguistics	90.4	3.30
Urban studies, affairs	89.0	6.40
Social sciences, other	82.7	4.70
Engineering	91.4	0.95
Aerospace, aeronautical, and astronautical engineering	99.5	0.55
Chemical engineering	88.5	3.85
Civil engineering	91.6	2.40
Electrical and computer engineering	90.8	2.15
Computer engineering	94.9	2.40
Electrical, electronics, and communications engineering	90.0	2.45
Mechanical engineering	95.1	2.20
Metallurgical and materials engineering	86.9	3.70
Other engineering	91.9	1.55
Agricultural engineering	94.4	2.95
Bioengineering and biomedical engineering	97.0	1.95
Engineering mechanics, physics, and science	84.9	8.00
Industrial and manufacturing engineering	90.6	2.60
Nuclear engineering	89.4	4.75
Engineering, other	92.9	2.15
Health	90.6	2.55
Communication disorders sciences and services	91.6	5.70
Hospital and medical administration services	94.8	3.20
Pharmacy, pharmaceutical sciences, and administration	95.6	3.35
Public health	86.5	6.00
Registered nursing, nursing administration, nursing research	89.3	6.60
Health sciences, other	90.7	4.85

D = suppressed to avoid disclosure of confidential information.

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, not 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.