

TABLE 4-4

Labor force participation rate among non-U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2019

(Percent and SE)

Field	Labor force participation rate	
	Percent	SE
All fields	91.5	0.45
Science	90.5	0.50
Biological, agricultural, and environmental life sciences	90.8	0.95
Agricultural and food sciences	88.0	1.95
Agricultural sciences	87.3	4.80
Animal sciences	91.6	2.90
Food sciences and technology	89.5	4.55
Plant sciences	86.6	3.65
Soil sciences	81.8	7.25
Biochemistry and biophysics	84.7	5.30
Biochemistry	87.5	5.35
Biophysics	73.9	14.50
Cell, cellular biology, and molecular biology	96.8	1.55
Microbiological sciences and immunology	95.2	2.40
Immunology	97.3	2.05
Microbiological sciences	94.5	3.05
Natural resources and conservation	89.9	2.65
Fish, fisheries, wildlife and wildlands science and management	79.6	6.70
Forestry	89.9	4.95
Natural resource conservation, research, management, and policy	97.0	2.00
Zoology	83.4	5.45
Other biological sciences	92.2	1.40
Biomathematics, bioinformatics, and computational biology	D	D
Botany and plant biology	79.9	4.65
Epidemiology, ecology, and population biology	93.8	2.65
Genetics	92.1	5.85
Neurobiology and neuroscience	92.4	4.20
Nutrition sciences	91.4	5.05
Pharmacology and toxicology	97.7	2.35
Physiology, pathology, and related sciences	97.3	1.60
Biological and biomedical sciences, general	99.6	0.45
Biological and biomedical sciences, other	89.0	5.20
Computer and information sciences	96.7	1.25
Computer science	96.9	1.40
Information science, studies	96.7	1.85
Computer and information sciences, other	93.4	5.55
Mathematics and statistics	89.4	2.25
Applied mathematics	97.7	2.40
Mathematics	87.4	3.20
Statistics	92.6	4.45
Mathematics and statistics, other	90.9	4.00
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	90.7	1.20
Astronomy and astrophysics	92.5	3.40
Chemistry, except biochemistry	90.8	2.20
Inorganic chemistry	94.2	3.40
Organic chemistry	89.3	4.40
Chemistry, other, except biochemistry	90.7	2.75
Geosciences, atmospheric sciences, and ocean sciences	89.6	1.85
Atmospheric sciences and meteorology	96.2	1.50

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	Percent	SE
Geological and earth sciences, geosciences	86.6	2.95
Ocean sciences and marine sciences	90.6	6.55
Oceanography, chemical and physical	94.3	3.50
Physics	90.9	2.10
Psychology	87.2	2.20
Clinical psychology	82.3	8.10
Counseling and applied psychology	89.5	6.45
Educational and school psychology	87.8	6.05
Industrial and organizational psychology	98.1	2.20
Research and experimental psychology	87.4	2.70
Psychology, general	76.6	10.35
Psychology, other	94.9	3.80
Social sciences	90.1	1.10
Economics	91.1	1.65
Political science and government	97.5	1.30
Political science and government	98.1	1.35
Public policy analysis	95.3	3.35
Sociology, demography, and population studies	77.1	5.15
Other social sciences	89.9	1.60
Anthropology	89.6	3.85
Area, ethnic, cultural, gender, and group studies	89.5	5.35
Geography and cartography	95.5	2.45
International relations and national security studies	95.0	2.45
Linguistics	89.3	4.75
Urban studies, affairs	84.3	5.95
Social sciences, other	87.5	3.80
Engineering	93.9	0.95
Aerospace, aeronautical, and astronautical engineering	97.7	2.30
Chemical engineering	96.0	2.40
Civil engineering	95.8	1.80
Electrical and computer engineering	93.2	2.20
Computer engineering	88.1	6.65
Electrical, electronics, and communications engineering	94.0	2.30
Mechanical engineering	91.4	3.10
Industrial engineers	95.9	1.45
Other engineering	92.1	1.90
Agricultural engineering	92.5	3.50
Bioengineering and biomedical engineering	90.1	7.90
Engineering mechanics, physics, and science	95.1	3.70
Industrial and manufacturing engineering	93.1	2.05
Nuclear engineering	92.1	4.25
Engineering, other	90.3	3.05
Health	95.1	1.50
Communication disorders sciences and services	D	D
Hospital and medical administration services	D	D
Pharmacy, pharmaceutical sciences, and administration	94.4	4.30
Public health	92.2	4.05
Registered nursing, nursing administration, nursing research	92.0	4.65
Health sciences, other	98.0	1.10

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

Note(s):

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 2019, 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 2019.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2019.