

TABLE 4-3

Labor force participation rate among U.S. residing doctoral scientists and engineers, by fine field of doctorate: 2021

(Percent and SE)

Field of study	Labor force participation rate	
	Percent	SE
All fields	86.8	0.20
Science	85.9	0.20
Biological, agricultural, and environmental life sciences	86.8	0.35
Agricultural and food sciences	80.9	1.40
Agricultural sciences	71.5	3.25
Animal sciences	86.1	2.55
Food sciences and technology	83.2	2.90
Plant sciences	79.6	2.40
Soil sciences	75.0	4.55
Biochemistry and biophysics	84.7	1.25
Biochemistry	84.2	1.35
Biophysics	87.3	2.40
Cell, cellular biology, and molecular biology	91.1	0.90
Microbiological sciences and immunology	87.5	1.05
Immunology	89.5	1.60
Microbiological sciences	86.4	1.35
Natural resources and conservation	82.3	1.50
Fish, fisheries, wildlife, and wildlands science and management	76.5	3.80
Forestry	79.5	3.65
Natural resource conservation, research, management, and policy	87.1	2.00
Zoology	77.5	1.85
Other biological sciences	88.1	0.45
Biomathematics, bioinformatics, and computational biology	93.9	0.95
Botany and plant biology	75.1	1.95
Epidemiology, ecology, and population biology	88.7	1.15
Genetics	88.2	1.75
Neurobiology and neuroscience	95.8	0.85
Nutrition sciences	85.9	1.70
Pharmacology and toxicology	87.7	1.65
Physiology, pathology, and related sciences	85.5	1.30
Biological and biomedical sciences, general	88.4	1.40
Biological and biomedical sciences, other	81.5	2.80
Computer and information sciences	92.9	0.65
Computer science	93.6	0.70
Information science, studies	83.3	2.25
Computer and information sciences, other	95.0	1.30
Mathematics and statistics	86.3	0.85
Applied mathematics	88.4	1.80
Mathematics	83.2	1.30
Statistics	89.2	1.75
Mathematics and statistics, other	90.4	1.60
Physical sciences, geosciences, atmospheric sciences, and ocean sciences	85.7	0.50
Astronomy and astrophysics	88.5	1.70
Chemistry, except biochemistry	84.6	0.75
Inorganic chemistry	83.1	2.00
Organic chemistry	82.0	1.35
Chemistry, other, except biochemistry	86.2	0.90
Geosciences, atmospheric sciences, and ocean sciences	84.2	0.75
Atmospheric sciences and meteorology	88.0	1.35
Geological and earth sciences, geosciences	82.3	1.15

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Field of study	Labor force participation rate	
	Percent	SE
Ocean sciences and marine sciences	88.5	1.45
Oceanography, chemical and physical	85.5	2.55
Physics	87.7	0.85
Psychology	83.6	0.55
Clinical psychology	86.2	1.05
Counseling and applied psychology	87.2	1.55
Educational and school psychology	77.1	1.50
Industrial and organizational psychology	87.4	1.70
Research and experimental psychology	81.2	1.10
Psychology, general	84.5	1.95
Psychology, other	81.7	2.05
Social sciences	84.4	0.55
Economics	85.8	1.10
Political science and government	87.5	1.20
Political science and government	87.7	1.40
Public policy analysis	86.9	2.35
Sociology, demography, and population studies	82.6	1.25
Other social sciences	82.6	0.80
Anthropology	80.5	1.50
Area, ethnic, cultural, gender, and group studies	84.9	2.05
Geography and cartography	86.5	1.50
International relations and national security studies	84.2	2.55
Linguistics	82.9	2.70
Urban studies, affairs	75.6	2.85
Social sciences, other	83.0	1.50
Engineering	90.7	0.40
Aerospace, aeronautical, and astronautical engineering	92.5	1.25
Chemical engineering	89.3	1.20
Civil engineering	91.8	1.20
Electrical and computer engineering	91.8	0.70
Computer engineering	94.6	1.40
Electrical, electronics, and communications engineering	91.4	0.75
Mechanical engineering	91.7	0.95
Metallurgical and materials engineering	90.2	1.05
Other engineering	88.8	0.65
Agricultural engineering	83.4	2.15
Bioengineering and biomedical engineering	95.3	0.90
Engineering mechanics, physics, and science	81.7	2.40
Industrial and manufacturing engineering	85.0	1.65
Nuclear engineering	88.8	1.90
Engineering, other	86.5	1.80
Health	85.3	0.75
Communication disorders sciences and services	80.5	2.10
Hospital and medical administration services	76.3	4.25
Pharmacy, pharmaceutical sciences, and administration	88.5	1.65
Public health	91.1	1.35
Registered nursing, nursing administration, nursing research	76.2	2.30
Health sciences, other	88.9	1.30

SE = standard error.

Note(s):

Percentage rounded to the nearest 0.1%, standard error of the unrounded percentage (based on unrounded counts), 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 2021, 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 2021.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2021.