

TABLE 15-4

Employed U.S. residing doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

(Number and SE)

| Field of study | All employed | | Primary work activity ^a | | | |
|--------------------------------------------------------------------------|--------------|-------|------------------------------------|-------|--------------------|-------|
| | | | Any R&D ^b | | Other ^c | |
| | Number | SE | Number | SE | Number | SE |
| All fields | 857,200 | 1,975 | 351,000 | 1,975 | 506,250 | 2,300 |
| Science | 640,300 | 1,900 | 243,250 | 1,700 | 397,100 | 2,150 |
| Biological, agricultural, and environmental life sciences | 220,700 | 1,100 | 102,300 | 1,300 | 118,450 | 1,350 |
| Agricultural and food sciences | 17,400 | 350 | 8,150 | 325 | 9,250 | 375 |
| Agricultural sciences | 950 | 50 | 350 | 50 | 600 | 50 |
| Animal sciences | 4,550 | 175 | 1,850 | 150 | 2,750 | 175 |
| Food sciences and technology | 3,750 | 175 | 1,950 | 150 | 1,800 | 150 |
| Plant sciences | 5,900 | 250 | 3,050 | 200 | 2,850 | 250 |
| Soil sciences | 2,200 | 125 | 950 | 100 | 1,250 | 125 |
| Biochemistry and biophysics | 29,450 | 425 | 14,850 | 525 | 14,600 | 500 |
| Biochemistry | 24,350 | 400 | 12,000 | 500 | 12,350 | 475 |
| Biophysics | 5,100 | 175 | 2,850 | 175 | 2,250 | 175 |
| Cell, cellular biology, and molecular biology | 31,200 | 450 | 13,400 | 575 | 17,850 | 650 |
| Microbiological sciences and immunology | 23,800 | 400 | 11,200 | 475 | 12,600 | 525 |
| Immunology | 8,950 | 200 | 4,500 | 300 | 4,450 | 325 |
| Microbiological sciences | 14,900 | 325 | 6,700 | 350 | 8,200 | 375 |
| Natural resources and conservation | 8,800 | 225 | 3,500 | 175 | 5,300 | 250 |
| Fish, fisheries, wildlife and wildlands science and management | 2,200 | 150 | 1,000 | 100 | 1,200 | 125 |
| Forestry | 2,600 | 150 | 1,050 | 75 | 1,550 | 150 |
| Natural resource conservation, research, management, and policy | 4,000 | 150 | 1,500 | 150 | 2,550 | 175 |
| Zoology | 7,200 | 225 | 2,800 | 200 | 4,400 | 225 |
| Other biological sciences | 102,800 | 675 | 48,400 | 750 | 54,450 | 850 |
| Biomathematics, bioinformatics, and computational biology | 5,150 | 100 | 3,300 | 150 | 1,850 | 150 |
| Botany and plant biology | 6,150 | 225 | 2,650 | 175 | 3,500 | 200 |
| Epidemiology, ecology, and population biology | 15,950 | 275 | 7,800 | 350 | 8,150 | 350 |
| Genetics | 8,750 | 250 | 4,800 | 250 | 3,950 | 225 |
| Neurobiology and neuroscience | 16,800 | 275 | 7,950 | 350 | 8,850 | 325 |
| Nutrition sciences | 4,150 | 125 | 1,750 | 125 | 2,400 | 150 |
| Pharmacology and toxicology | 12,700 | 300 | 6,300 | 275 | 6,450 | 325 |
| Physiology, pathology, and related sciences | 15,400 | 300 | 6,000 | 275 | 9,450 | 350 |
| Biological and biomedical sciences, general | 12,750 | 300 | 5,600 | 325 | 7,150 | 375 |
| Biological and biomedical sciences, other | 4,950 | 200 | 2,250 | 200 | 2,750 | 175 |
| Computer and information sciences | 31,100 | 400 | 11,250 | 450 | 19,900 | 475 |
| Computer science | 26,750 | 400 | 9,600 | 450 | 17,150 | 475 |
| Information science, studies | 2,600 | 75 | 950 | 100 | 1,650 | 100 |
| Computer and information sciences, other | 1,800 | 50 | 700 | 50 | 1,100 | 75 |
| Mathematics and statistics | 36,650 | 450 | 13,400 | 450 | 23,250 | 500 |
| Applied mathematics | 8,500 | 200 | 3,250 | 225 | 5,250 | 250 |
| Mathematics | 16,500 | 375 | 5,100 | 275 | 11,450 | 350 |
| Statistics | 7,450 | 225 | 3,700 | 275 | 3,800 | 275 |
| Mathematics and statistics, other | 4,200 | 125 | 1,400 | 125 | 2,800 | 125 |
| Physical sciences, geosciences, atmospheric sciences, and ocean sciences | 133,750 | 950 | 60,500 | 950 | 73,300 | 1,075 |
| Astronomy and astrophysics | 5,850 | 175 | 2,300 | 150 | 3,550 | 125 |
| Chemistry, except biochemistry | 65,300 | 700 | 28,800 | 750 | 36,550 | 850 |
| Inorganic chemistry | 8,750 | 225 | 3,100 | 225 | 5,600 | 250 |
| Organic chemistry | 17,600 | 375 | 8,300 | 400 | 9,300 | 400 |
| Chemistry, other, except biochemistry | 39,000 | 575 | 17,350 | 575 | 21,600 | 625 |
| Geosciences, atmospheric sciences, and ocean sciences | 22,050 | 300 | 10,150 | 275 | 11,900 | 300 |

TABLE 15-4

Employed U.S. residing doctoral scientists and engineers, by fine field of doctorate and primary work activity: 2019

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|---------------------------------------------------------|--------------|-------|------------------------------------|-------|--------------------|-------|
| | | | Any R&D ^b | | Other ^c | |
| | Number | SE | Number | SE | Number | SE |
| Atmospheric sciences and meteorology | 3,900 | 75 | 2,100 | 100 | 1,800 | 100 |
| Geological and earth sciences, geosciences | 13,550 | 275 | 5,950 | 250 | 7,600 | 250 |
| Ocean sciences and marine sciences | 2,150 | 75 | 900 | 75 | 1,250 | 75 |
| Oceanography, chemical and physical | 2,450 | 125 | 1,150 | 100 | 1,250 | 125 |
| Physics | 40,550 | 575 | 19,250 | 625 | 21,300 | 625 |
| Psychology | 115,350 | 825 | 23,100 | 625 | 92,250 | 825 |
| Clinical psychology | 41,100 | 525 | 4,650 | 350 | 36,450 | 575 |
| Counseling and applied psychology | 14,850 | 275 | 900 | 150 | 13,950 | 325 |
| Educational and school psychology | 14,100 | 275 | 2,450 | 250 | 11,650 | 325 |
| Industrial and organizational psychology | 4,850 | 150 | 1,250 | 125 | 3,550 | 175 |
| Research and experimental psychology | 27,800 | 400 | 10,400 | 375 | 17,400 | 425 |
| Psychology, general | 7,900 | 250 | 2,150 | 275 | 5,700 | 325 |
| Psychology, other | 4,750 | 175 | 1,200 | 150 | 3,550 | 200 |
| Social sciences | 102,700 | 900 | 32,750 | 700 | 69,950 | 975 |
| Economics | 26,900 | 550 | 11,400 | 450 | 15,500 | 550 |
| Political science and government | 22,450 | 425 | 6,700 | 375 | 15,750 | 475 |
| Political science and government | 18,350 | 400 | 5,350 | 350 | 13,000 | 450 |
| Public policy analysis | 4,100 | 175 | 1,350 | 125 | 2,750 | 150 |
| Sociology, demography, and population studies | 15,200 | 325 | 4,650 | 275 | 10,550 | 350 |
| Other social sciences | 38,150 | 500 | 10,000 | 350 | 28,200 | 475 |
| Anthropology | 11,400 | 300 | 3,400 | 250 | 7,950 | 300 |
| Area, ethnic, cultural, gender, and group studies | 3,900 | 125 | 700 | 100 | 3,200 | 150 |
| Geography and cartography | 4,750 | 175 | 1,450 | 150 | 3,300 | 175 |
| International relations and national security studies | 2,350 | 150 | 450 | 75 | 1,900 | 125 |
| Linguistics | 4,950 | 250 | 1,000 | 150 | 3,950 | 250 |
| Urban studies, affairs | 1,600 | 100 | 400 | 50 | 1,200 | 100 |
| Social sciences, other | 9,250 | 250 | 2,600 | 175 | 6,650 | 250 |
| Engineering | 176,700 | 1,175 | 92,800 | 1,175 | 83,900 | 1,225 |
| Aerospace, aeronautical, and astronautical engineering | 7,050 | 225 | 3,900 | 250 | 3,150 | 250 |
| Chemical engineering | 20,800 | 500 | 10,500 | 450 | 10,300 | 475 |
| Civil engineering | 19,250 | 400 | 8,600 | 375 | 10,700 | 450 |
| Electrical and computer engineering | 48,550 | 650 | 26,650 | 600 | 21,900 | 650 |
| Computer engineering | 7,000 | 175 | 2,850 | 175 | 4,150 | 225 |
| Electrical, electronics, and communications engineering | 41,550 | 625 | 23,800 | 575 | 17,750 | 625 |
| Mechanical engineering | 26,550 | 425 | 14,700 | 525 | 11,850 | 525 |
| Industrial engineers | 16,450 | 350 | 9,550 | 450 | 6,900 | 375 |
| Other engineering | 38,050 | 450 | 18,900 | 450 | 19,150 | 475 |
| Agricultural engineering | 1,900 | 75 | 900 | 75 | 1,000 | 75 |
| Bioengineering and biomedical engineering | 13,200 | 250 | 7,350 | 300 | 5,850 | 300 |
| Engineering mechanics, physics, and science | 4,400 | 150 | 2,650 | 150 | 1,700 | 150 |
| Industrial and manufacturing engineering | 8,800 | 275 | 3,600 | 225 | 5,250 | 275 |
| Nuclear engineering | 3,100 | 125 | 1,650 | 125 | 1,450 | 100 |
| Engineering, other | 6,600 | 200 | 2,750 | 225 | 3,850 | 200 |
| Health | 40,200 | 475 | 14,950 | 500 | 25,250 | 625 |
| Communication disorders sciences and services | 3,100 | 125 | 750 | 125 | 2,350 | 125 |
| Hospital and medical administration services | 1,550 | 100 | 550 | 75 | 950 | 100 |
| Pharmacy, pharmaceutical sciences, and administration | 8,050 | 175 | 4,750 | 250 | 3,300 | 250 |
| Public health | 8,400 | 225 | 3,650 | 225 | 4,750 | 250 |

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|--------------------------------------------------------------|--------------|-----|------------------------------------|-----|--------------------|-----|
| | | | Any R&D ^b | | Other ^c | |
| | Number | SE | Number | SE | Number | SE |
| Registered nursing, nursing administration, nursing research | 9,000 | 250 | 1,650 | 200 | 7,350 | 325 |
| Health sciences, other | 10,150 | 225 | 3,600 | 225 | 6,550 | 250 |

SE = standard error.

^a Primary work activity on principal job.^b R&D is defined as basic research, applied research, design, and development.^c Other work activities includes all non-R&D activities.**Note(s):**

Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses.

Primary and secondary work activities were self-defined by respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" 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.