

Table 1-12**Median years to research doctorate, by historical major field of doctorate: Selected years, 1971–2021**

(Median years)

Field and time to degree	1971	1976	1981	1986	1991	1996	2001	2006	2011	2016	2021
All fields											
Since earning bachelor's	8.0	8.7	9.5	10.5	10.5	10.8	10.2	9.6	9.1	8.8	8.7
Since starting graduate school	6.7	7.7	7.9	8.7	8.7	8.7	8.3	8.0	7.7	7.3	7.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.7
Life sciences											
Since earning bachelor's	6.9	7.3	7.5	8.7	9.2	9.6	9.0	8.6	8.6	8.2	8.3
Since starting graduate school	5.7	6.2	6.4	7.2	7.7	7.9	7.3	7.0	6.9	6.7	6.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.4
Agricultural sciences and natural resources											
Since earning bachelor's	7.9	8.2	8.2	9.3	10.4	11.5	10.7	9.7	9.7	9.0	8.5
Since starting graduate school	6.2	6.7	6.5	7.7	8.3	8.7	8.7	8.0	8.0	7.3	7.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.1	5.0
Biological and biomedical sciences											
Since earning bachelor's	6.5	7.0	7.0	8.0	8.4	8.7	8.2	8.0	8.0	7.7	8.0
Since starting graduate school	5.7	6.1	6.2	6.7	6.9	7.2	6.7	6.7	6.7	6.4	6.4
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.7
Health sciences											
Since earning bachelor's	8.5	8.8	10.0	12.0	14.0	14.4	13.7	12.4	11.9	11.3	11.0
Since starting graduate school	6.7	7.5	8.7	10.0	11.2	11.7	10.7	9.7	9.3	8.7	8.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.0
Physical sciences and earth sciences											
Since earning bachelor's	6.2	6.9	6.7	7.2	7.6	8.0	7.5	7.4	7.4	6.9	6.9
Since starting graduate school	5.7	5.9	5.9	6.2	6.7	6.8	6.6	6.5	6.6	6.1	6.0
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.5
Chemistry											
Since earning bachelor's	5.7	6.3	6.0	6.6	6.9	7.3	6.8	6.9	6.9	6.3	6.3
Since starting graduate school	5.1	5.7	5.2	5.7	5.8	6.2	5.9	5.9	6.0	5.7	5.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.3
Geosciences, atmospheric sciences, and ocean sciences											
Since earning bachelor's	7.7	8.0	8.0	9.0	9.3	11.0	9.6	9.0	8.6	8.0	8.0
Since starting graduate school	6.7	6.7	7.2	7.7	8.0	9.2	8.2	7.7	7.7	6.9	6.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.3
Physics and astronomy											
Since earning bachelor's	6.7	7.0	7.0	7.3	7.7	7.8	7.5	7.6	7.4	7.0	7.0

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Since starting graduate school	6.0	6.5	6.3	6.5	6.7	6.9	6.7	6.8	6.7	6.4	6.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.9	5.9
Mathematics and computer sciences											
Since earning bachelor's	6.3	7.0	7.3	8.0	8.6	9.2	8.5	8.2	7.9	7.9	7.9
Since starting graduate school	5.7	6.2	6.2	6.9	7.2	7.7	7.2	7.2	6.9	6.9	6.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.5
Computer and information sciences											
Since earning bachelor's	-	-	7.7	9.3	8.9	10.0	9.6	8.9	8.9	8.8	8.8
Since starting graduate school	-	-	6.7	7.6	7.7	8.2	7.9	7.8	7.7	7.6	7.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.8
Mathematics and statistics											
Since earning bachelor's	6.3	7.0	7.0	7.3	8.3	8.3	8.0	7.3	7.0	7.0	7.0
Since starting graduate school	5.7	6.2	6.2	6.6	6.9	7.1	6.8	6.7	6.2	6.1	6.2
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.3
Psychology and social sciences											
Since earning bachelor's	7.3	8.0	9.0	10.2	10.7	10.3	9.9	9.8	9.6	9.6	9.3
Since starting graduate school	6.7	6.7	7.7	8.7	8.7	8.2	7.9	8.0	7.8	7.9	7.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.0	6.0
Psychology											
Since earning bachelor's	6.3	7.0	8.4	9.9	10.3	9.6	9.0	8.9	8.3	8.6	8.6
Since starting graduate school	5.7	5.9	7.1	8.2	8.2	7.7	7.2	7.0	6.9	7.0	7.0
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.0	5.9
Anthropology											
Since earning bachelor's	8.3	9.1	9.8	11.7	12.8	12.5	12.0	12.3	12.0	12.0	11.3
Since starting graduate school	7.7	7.9	8.7	10.2	10.7	10.2	9.7	10.3	9.6	9.3	9.6
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	7.7	7.3
Economics											
Since earning bachelor's	7.2	7.8	8.2	8.5	9.3	9.4	8.7	8.6	8.6	8.3	8.6
Since starting graduate school	6.5	6.7	6.9	7.2	7.7	7.7	7.0	7.2	7.0	7.0	7.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.8
Political science and government											
Since earning bachelor's	8.2	9.0	10.0	10.4	11.0	10.3	10.4	11.0	10.2	10.1	9.3
Since starting graduate school	7.2	8.1	8.7	9.2	9.5	8.3	8.7	9.2	8.3	8.2	7.9
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.3	6.0

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Sociology											
Since earning bachelor's	8.2	8.6	10.2	11.4	12.1	12.0	11.0	11.1	10.7	10.9	10.4
Since starting graduate school	7.7	7.7	9.1	9.9	9.9	9.5	8.9	9.3	8.9	8.9	8.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	7.0	6.8
Other social sciences											
Since earning bachelor's	9.0	9.5	10.5	12.3	12.7	12.3	12.0	11.7	11.7	11.3	11.2
Since starting graduate school	7.7	8.2	8.7	9.9	9.9	9.8	9.9	9.3	9.3	9.3	9.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.2	6.0
Engineering											
Since earning bachelor's	7.2	7.5	8.0	8.2	8.6	9.0	8.4	8.1	7.8	7.3	7.4
Since starting graduate school	6.0	6.4	6.7	6.7	6.9	7.2	7.1	7.0	6.8	6.5	6.6
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.3
Aerospace, aeronautical, and astronautical engineering											
Since earning bachelor's	6.7	7.5	9.7	9.6	8.3	8.2	8.1	7.9	7.0	7.3	6.8
Since starting graduate school	5.7	6.9	8.5	8.2	6.9	7.2	7.7	6.7	6.6	6.7	6.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.6	5.3
Bioengineering and biomedical engineering											
Since earning bachelor's	7.5	6.9	7.5	9.4	8.3	8.0	7.7	7.3	7.0	6.7	7.0
Since starting graduate school	6.2	6.2	6.7	7.8	7.0	7.2	7.0	6.3	6.3	6.0	6.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.4	5.3
Chemical engineering											
Since earning bachelor's	6.2	6.6	6.7	6.9	7.0	7.0	6.5	6.6	6.6	6.1	6.3
Since starting graduate school	5.2	5.7	5.7	5.7	5.9	6.1	5.7	5.8	5.7	5.6	5.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.0	5.0
Civil engineering											
Since earning bachelor's	8.0	9.0	8.3	8.9	9.3	10.4	9.8	8.9	9.1	8.2	8.8
Since starting graduate school	6.4	6.7	6.7	6.9	7.1	8.3	7.7	7.8	7.7	7.0	7.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	4.9	4.9
Electrical, electronics, and communications engineering											
Since earning bachelor's	-	-	-	8.0	8.4	8.6	8.5	8.2	7.9	7.8	8.0
Since starting graduate school	-	-	-	6.6	6.7	7.2	7.2	7.2	7.0	7.0	7.0
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.6
Industrial and manufacturing engineering											
Since earning bachelor's	9.0	8.7	8.9	8.9	9.9	10.0	10.4	9.6	9.5	8.3	8.9

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(Median years)

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Since starting graduate school	7.2	6.2	7.7	6.9	7.7	7.9	7.7	7.9	8.0	7.1	7.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.0	5.0
Materials science engineering											
Since earning bachelor's	8.0	7.1	7.3	8.1	8.7	8.7	8.0	7.6	7.0	6.4	6.5
Since starting graduate school	5.9	6.6	6.1	6.7	6.7	6.7	6.7	6.5	6.3	5.7	5.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.1	5.0
Mechanical engineering											
Since earning bachelor's	7.4	8.0	8.0	8.5	9.0	9.3	8.6	8.2	7.7	7.3	7.5
Since starting graduate school	6.2	6.7	6.4	6.7	7.2	7.2	7.2	7.0	7.0	6.6	6.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.3
Other engineering											
Since earning bachelor's	7.2	7.6	8.0	8.5	9.0	10.2	9.0	8.7	8.5	8.0	8.0
Since starting graduate school	6.1	6.4	6.7	6.9	7.5	7.9	7.4	7.3	7.3	7.0	6.9
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.2	5.3
Education											
Since earning bachelor's	12.9	12.8	13.6	15.9	18.5	20.3	19.0	16.7	15.0	15.0	14.7
Since starting graduate school	10.1	10.2	10.9	13.2	15.2	15.9	13.9	12.7	11.7	11.7	11.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.0	5.7
Education administration											
Since earning bachelor's	14.6	15.2	15.3	17.2	20.3	22.9	22.5	20.0	19.4	19.1	18.7
Since starting graduate school	11.7	12.7	12.7	14.7	16.9	19.2	16.7	14.7	14.9	15.3	14.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.3	5.8
Education research											
Since earning bachelor's	11.5	11.6	12.9	15.2	17.7	18.7	17.0	15.2	13.8	13.5	13.4
Since starting graduate school	8.9	9.5	10.7	12.7	14.7	14.7	12.7	11.7	10.7	11.0	10.9
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.0	5.8
Teacher education											
Since earning bachelor's	14.0	14.0	13.9	17.0	19.1	20.5	21.0	17.6	16.0	16.3	17.2
Since starting graduate school	11.0	10.1	10.9	13.7	15.3	15.7	14.7	13.3	12.0	13.3	12.4
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.3	5.5
Teaching fields											
Since earning bachelor's	12.0	12.2	12.7	14.3	15.6	16.9	15.6	14.6	15.0	14.4	15.0
Since starting graduate school	9.7	9.9	10.2	11.9	12.7	12.9	11.9	11.3	11.7	11.2	11.4
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.3

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(Median years)

Field and time to degree	1971	1976	1981	1986	1991	1996	2001	2006	2011	2016	2021
Other education											
Since earning bachelor's	13.9	13.3	14.2	15.7	17.9	19.6	18.0	16.7	14.6	15.3	14.6
Since starting graduate school	11.2	10.2	10.9	12.7	14.3	14.7	13.8	12.7	11.2	12.3	11.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.2	5.6
Humanities and arts											
Since earning bachelor's	9.0	9.9	11.0	12.3	12.6	12.0	11.6	11.6	11.2	11.0	11.2
Since starting graduate school	8.0	8.7	9.7	10.7	10.7	9.9	9.7	9.7	9.3	9.3	9.6
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	7.0	6.8
Foreign languages and literature											
Since earning bachelor's	9.2	10.0	11.3	12.2	12.0	11.0	10.8	11.8	11.0	10.6	11.7
Since starting graduate school	7.7	9.0	9.9	10.7	10.2	9.2	9.0	9.7	9.2	8.7	9.9
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.7	6.8
History											
Since earning bachelor's	8.7	10.0	11.2	12.4	12.2	11.5	11.5	12.0	11.2	10.9	11.0
Since starting graduate school	7.7	8.9	9.7	10.6	10.3	9.7	9.7	9.7	9.2	9.2	9.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	7.2	6.9
Letters											
Since earning bachelor's	9.0	9.5	10.9	12.2	12.0	11.5	11.3	11.0	10.7	10.6	10.9
Since starting graduate school	7.7	8.7	9.2	10.7	9.9	9.2	9.2	9.2	8.9	9.0	9.0
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.7	6.7
Other humanities and arts											
Since earning bachelor's	10.0	10.1	11.0	12.3	13.0	13.0	12.6	12.0	11.9	11.4	11.4
Since starting graduate school	9.2	9.1	9.7	10.7	11.1	10.7	10.3	9.8	9.9	9.7	9.8
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	7.2	6.8
Other											
Since earning bachelor's	10.2	10.3	11.0	13.0	13.4	13.5	13.6	12.3	12.0	11.2	11.3
Since starting graduate school	7.9	8.2	8.9	10.2	10.7	10.2	10.7	9.8	9.3	9.0	9.1
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.3	5.3
Business management and administration											
Since earning bachelor's	9.0	9.8	10.5	12.0	12.2	12.7	13.0	11.9	11.8	10.8	10.7
Since starting graduate school	7.0	7.7	8.2	9.7	9.4	9.7	10.1	9.2	9.1	8.7	8.7
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.0	5.0
Communication											
Since earning bachelor's	13.3	8.7	10.0	12.2	13.2	12.0	12.3	11.6	10.7	10.6	10.0

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Field and time to degree	1971	1976	1981	1986	1991	1996	2001	2006	2011	2016	2021
Since starting graduate school	9.3	7.3	8.2	9.7	10.2	8.7	9.6	9.0	8.3	8.3	8.3
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	5.7	5.0
Non-science and engineering fields nec											
Since earning bachelor's	13.6	12.0	12.5	15.0	16.0	17.3	16.4	14.0	14.1	13.0	13.0
Since starting graduate school	11.7	9.7	10.3	12.2	13.7	13.7	13.7	11.5	11.2	10.6	10.5
Since starting doctoral program ^a	na	na	na	na	na	na	na	na	na	6.0	5.8

na = not available; data were not provided prior to 2014.

nec = not elsewhere classified.

^a Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.

Note(s):

Beginning in 2021, a modified version of the 2020 Classification of Instructional Programs (CIP) codes was used in the survey data collection; the historical fields were constructed using the SED-CIP code crosswalk in table A-6. Therefore, the field of doctorate data in 2021 may not be comparable to prior years; see the "Technical Notes" for more information, table A-4 for a summary of SED-CIP codes in the new SED field taxonomy, and table A-5 for a full list of SED-CIP codes in the new field taxonomy.

Source(s):

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.