

Nuclear Engineering Enrollments and Degrees Survey, 2017 – 2018 Data

Number 80

Oak Ridge Institute for Science and Education

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Survey Universe

The 2018 survey includes degrees granted for the academic years September 2016 – August 2017 and September 2017 – August 2018, and enrollments for fall 2018. Thirty-five nuclear engineering academic programs were surveyed with all 35 responding and data reported from 34 programs. The enrollments and degrees data include students majoring in nuclear engineering or in an option program equivalent to a major. Some nuclear engineering programs have indicated that health physics option enrollments and degrees are also reported in the health physics survey.

Degree Data

Bachelor's Degrees. The number of B.S. degrees in 2018 awarded by nuclear engineering programs is similar to levels reported for 2017 and 2016, 4 percent lower than the number awarded in 2015 but nearly the same as the number of degrees awarded in 2014 ([Table 1](#)). The number of B.S. degrees in 2018 remains significantly above the levels reported in the previous decade and is 58 percent higher than the number reported for 2009. Nuclear engineering majors accounted for 86 percent of all B.S. degrees ([Table 2](#)).

Graduate Degrees. The number of master's degrees awarded by nuclear engineering programs in 2018 fell by 8 percent from 2017 and is 27 percent lower than the number awarded in 2016. The number of M.S. degrees awarded in 2018 was lower than any of the numbers reported since the beginning of the decade but is nearly 12 percent greater than the number reported in 2009. The number of doctorate degrees increased in 2018, continuing a trend of increases since 2015. The number of Ph.D. degrees awarded in nuclear engineering in 2018 is the highest reported since 1966, the first year for which survey data was collected ([Table 1](#)). Nuclear engineering majors in 2018 accounted for 92 percent of the M.S. degrees and 98 percent of the Ph.D. degrees ([Table 2](#)).

TABLE 1 | Nuclear Engineering Degrees, 2009-2018

Year	B.S.	M.S.	Ph.D.
2018	623	260	195
2017	619	282	170
2016	621	355	161
2015	652	363	147
2014	627	322	169
2013	655	362	147
2012	610	333	119
2011	524	277	113
2010	443	303	113
2009	395	233	87

Source: Oak Ridge Institute for Science and Education.

TABLE 2 | Nuclear Engineering Degrees by Curriculum, 2018

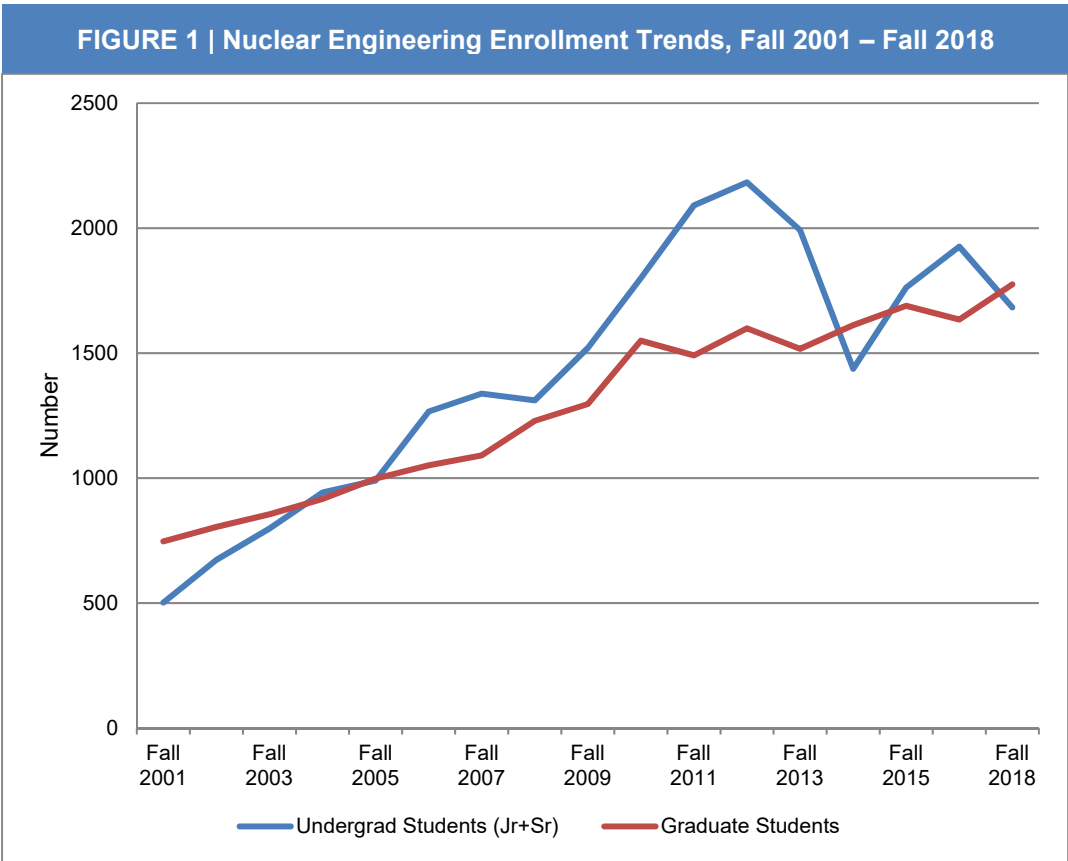
Curriculum	B.S.	M.S.	Ph.D.
Nuclear Engineering Major	535	238	192
Nuclear Engineering Option	88	22	3

Source: Oak Ridge Institute for Science and Education.

Enrollment Trends and Short-Term Outlook for Degree Trends

Undergraduate Students. In 2018, the enrollment of junior and senior nuclear engineering undergraduate students was approximately 1,680, a decrease of almost 13 percent from the enrollment level reported in 2016, 4.5 percent less than reported in 2015 but higher than the level reported for 2014 (Figure 1). Undergraduate enrollment reported for 2018 is the seventh highest undergraduate enrollment reported since 1985. However, undergraduate enrollment appears to be returning to lower levels last experienced 5 years ago. The decrease in undergraduate enrollments may result in modest decreases in the number of bachelor’s degrees earned over the next year or two, but the number of B.S. degrees should remain near 600 in 2019.

Graduate Students. Graduate enrollment in 2018 was 1,775 students, nearly 9 percent greater than graduate enrollments reported in 2016 and 5 percent higher than graduate enrollments reported for 2015 (Figure 1). Graduate enrollments continue their uneven advance from the low levels experienced 20 years ago and are at their highest level since 1976. The continued strength in graduate enrollment indicates that the total number of graduate degrees awarded in the near future is likely to remain near (or may even exceed) the levels of the last three years.



NOTE: Enrollment data for fall 2017 was not collected in the 2018 survey.
 Source: Oak Ridge Institute for Science and Education.

Employment or Other Post-Graduation Status

Data on employment or post-graduation status for those graduating in 2018 are shown in **Table 3**. The unknown/not reported category accounts for 37 percent of the B.S.-level graduates, 24 percent of the M.S.-level graduates, and 17 percent of the Ph.D.-level graduates. Excluding the unknown/not reported, continued study was the largest post-degree activity for the B.S.-level and M.S.-level graduates. For Ph.D. graduates, U.S. Department of Energy contractor employment was the largest category.

For B.S. graduates reporting their post-graduation plans, other than continued study, employment in the other nuclear-related sector had the largest number followed by those reporting they were still seeking employment. The next three largest sectors are U.S. military, active duty; nuclear utility employment; and other business employment. The number reported for DOE contractor employment of new B.S. graduates is the lowest reported since 2006, while the number reported for other nuclear-related employment is the highest number reported.

For M.S. graduates reporting as employed, U.S. military, active duty; DOE contractor employment; nuclear utility employment; other nuclear-related employment; Federal government employment; and other business accounted for the majority of employment plans. In recent years, the number of new M.S. graduates reporting plans for active military duty has increased from 4 in 2006 to 28 in 2015, falling somewhat to 24 in 2018. The share of new M.S. graduates reporting planned employment by nuclear utilities, other nuclear-related organizations, and DOE contractors continues to account for nearly 1 out of every 2 employed graduates since 2006.

For Ph.D. graduates, DOE contractor employment, Federal government employment, other nuclear-related employment, and other business employment each accounted for 16 or more of employed graduates. The number reported for DOE contractor employment is at the highest level since 1996, while the number of Ph.D. graduates still seeking employment is also the highest number reported since 1996.

TABLE 3 | Employment or Other Post-Graduation Status, 2018

	B.S.	M.S.	Ph.D.
Continued Study/Postdoctoral Appointment	143	88	33
Academic Employment	1	1	12
Federal Government Employment	15	10	19
DOE Contractor Employment	13	20	34
State and Local Government Employment	1	0	0
Nuclear Utility Employment	41	13	5
Other Nuclear-Related Employment	49	13	16
Other Business Employment	25	9	16
Foreign (non-U.S.) Employment	3	5	8
U.S. Military, Active Duty	44	24	7
Other Employment	11	2	0
Still Seeking Employment	45	13	12
Unknown/Not Reported	232	62	33
TOTALS	623	260	195

Source: Oak Ridge Institute for Science and Education.

TABLE 4 | Nuclear Engineering Degrees, 2017, by Academic Institution

State	Name of Institution	Degrees (Sept. 1, 2016 – Aug. 31, 2017)		
		B.S.	M.S.	Ph.D.
CA	University of California, Berkeley	14	8	6
CO	Colorado School of Mines	0	4	2
FL	University of Florida	24	17	6
GA	Georgia Institute of Technology	21	8	9
ID	Idaho State University	6	11	2
IL	University of Illinois at Urbana-Champaign	38	14	7
IN	Purdue University	21	9	3
KS	Kansas State University	8	2	2
MA	Massachusetts Institute of Technology	17	9	14
MA	University of Massachusetts Lowell	4	2	0
ME	University of Maine	0	1	0
MI	University of Michigan	25	29	15
MO	Missouri University of Science and Technology	38	9	3
MO	University of Missouri	0	0	4
NC	North Carolina State University	37	11	8
NM	University of New Mexico	13	4	6
NV	University of Nevada, Las Vegas	0	0	4
NY	Rensselaer Polytechnic Institute	33	4	4
NY	United States Military Academy at West Point	22	0	0
OH	Air Force Institute of Technology	0	8	1
OH	Ohio State University	0	9	5
OH	University of Cincinnati	0	1	0
OR	Oregon State University	38	13	3
PA	Penn State University	77	21	6
PA	University of Pittsburgh	40	2	0
SC	South Carolina State University	8	0	0
SC	University of South Carolina	0	7	0
TN	University of Tennessee	41	18	19
TX	Texas A&M University	54	18	14
TX	University of Texas	0	6	6
UT	University of Utah	0	3	3
VA	Virginia Commonwealth University	12	11	8
VA	Virginia Polytechnic Institute and State University	0	4	0
WI	University of Wisconsin-Madison	28	19	10
Totals		619	282	170

Source: Oak Ridge Institute for Science and Education.

TABLE 5 | Nuclear Engineering Degrees, 2018, by Academic Institution

State	Name of Institution	Degrees (Sept. 1, 2017 – Aug. 31, 2018)		
		B.S.	M.S.	Ph.D.
CA	University of California, Berkeley	19	24	11
CO	Colorado School of Mines	0	4	3
FL	University of Florida	18	8	5
GA	Georgia Institute of Technology	30	15	11
ID	Idaho State University	17	13	5
IL	University of Illinois at Urbana-Champaign	33	15	17
IN	Purdue University	17	10	9
KS	Kansas State University	9	1	1
MA	Massachusetts Institute of Technology	7	14	19
MA	University of Massachusetts Lowell	7	2	0
ME	University of Maine	0	0	0
MI	University of Michigan	24	23	16
MO	Missouri University of Science and Technology	32	3	4
MO	University of Missouri	0	0	4
NC	North Carolina State University	29	8	9
NM	University of New Mexico	16	7	6
NV	University of Nevada, Las Vegas	0	1	1
NY	Rensselaer Polytechnic Institute	16	2	7
NY	United States Military Academy at West Point	19	0	0
OH	Air Force Institute of Technology	0	9	3
OH	Ohio State University	33	7	3
OH	University of Cincinnati	0	1	0
OR	Oregon State University	31	6	2
PA	Penn State University	65	10	2
PA	University of Pittsburgh	39	1	0
SC	South Carolina State University	8	0	0
SC	University of South Carolina	0	3	0
TN	University of Tennessee	39	24	21
TX	Texas A&M University	82	16	13
TX	University of Texas	0	6	3
UT	University of Utah	0	3	2
VA	Virginia Commonwealth University	14	4	7
VA	Virginia Polytechnic Institute and State University	0	1	3
WI	University of Wisconsin-Madison	19	19	8
Totals		623	260	195

Source: Oak Ridge Institute for Science and Education.

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