



HEALTH PHYSICS Enrollments and Degrees Decreased at all Levels in 1997

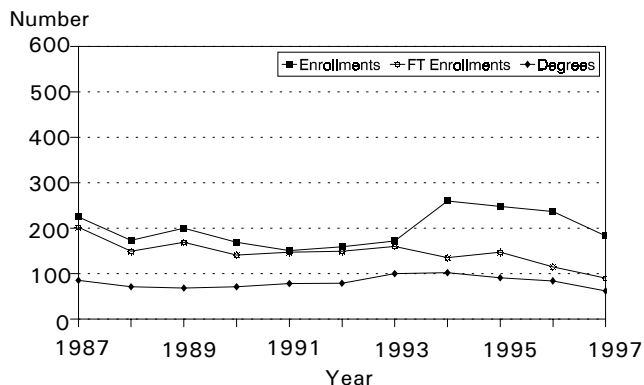
SURVEY UNIVERSE

The "Health Physics Enrollments and Degrees, 1997" survey consisted of 51 institutions offering a major in health physics/radiation protection or radiation health, or an option program equivalent to a major (for example, in radiobiology or biophysics) that prepare the graduates to perform as health physicists. Of the 51 programs, 1 was reported as inactive, and 5 programs have been suspended; 1 reported last degrees in 1996, 2 reported last degrees in 1997, and 2 programs were allowing students to complete their degrees. The data for 5 programs were estimated.

UNDERGRADUATE ENROLLMENTS AND DEGREES

The total number of undergraduate enrollments decreased from 237 to 183 students, or by 23 percent from 1996. The number of full-time students decreased from 115 to 90. (Figure 1.) As in 1996, the decrease was attributed to the suspended programs not accepting new enrollments, and a general decline among all programs. The majority of the students were enrolled in the health physics/radiation protection radiation health major (79 percent), followed by engineering or basic sciences option programs (11 percent).

Figure 1. Health Physics Undergraduate Enrollments and Degrees, 1987-1997



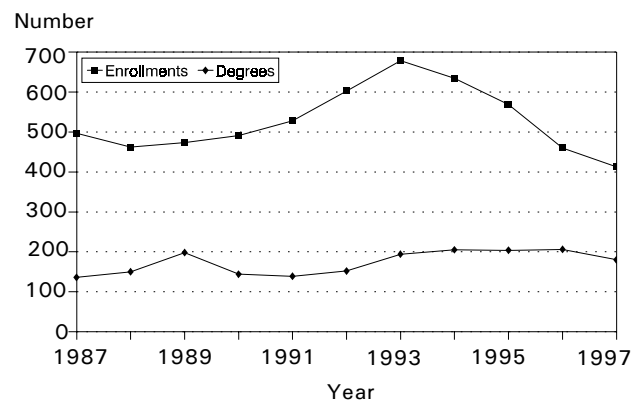
Undergraduate = Junior and Senior Level.
Source: U.S. Department of Energy.

Undergraduate degrees decreased from 84 to 62 students in 1997. As with enrollments, most of the degrees were awarded within the health physics/radiation protection or radiation health major (79 percent), while health physics/radiation protection engineering programs accounted for 15 percent of the undergraduates.

MASTER'S ENROLLMENTS AND DEGREES

In 1997, the number of master's enrollments decreased from 460 students to 413, or by 10 percent, continuing the downward trend since 1993. (Figure 2.)

Figure 2. Health Physics Master's Enrollments and Degrees, 1987-1997



Source: U.S. Department of Energy.

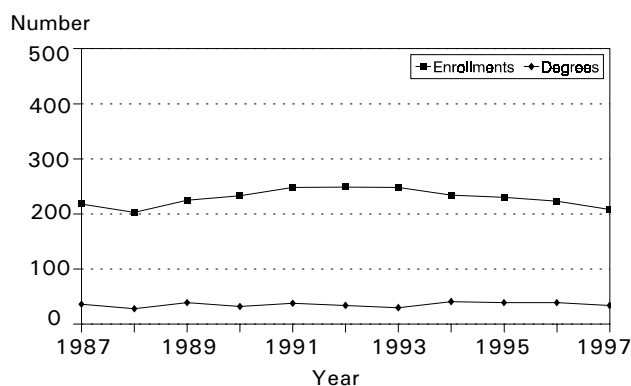
The number of full-time and part-time students were 234 and 179, respectively. Sixty-four percent of the students were enrolled in the health physics/radiation protection or radiation health programs. Among the option programs, engineering or basic sciences enrolled 16 percent, and medical or radiological physics programs accounted for 15 percent of the students.

The number of master's degrees decreased from 206 to 180 students, or by 13 percent from 1996. The majority of the degrees were awarded within the health physics/radiation protection or radiation health major (63 percent or 114 students), followed by medical or radiological physics (21 percent) and engineering or basic sciences programs (13 percent).

DOCTORAL ENROLLMENTS AND DEGREES

Doctoral enrollments decreased in 1997 by 7 percent, or from 223 students in 1996 to 208 (175 full-time and 33 part-time). (Figure 3.) Forty-six percent (87 full-time and 9 part-time students) were enrolled in the medical or radiological physics option programs, while health physics/radiation protection radiation health programs enrolled 35 percent (57 full-time and 16 part-time).

Figure 3. Health Physics Doctoral Enrollments and Degrees, 1987-1997



Source: U.S. Department of Energy.

Doctoral degrees decreased by 5 students, from 39 in 1996 to 34, or by 13 percent. As with enrollments the highest number of students received their degrees within the medical or radiological physics option programs (47 percent or 16 students), followed by the health physics/radiation protection or radiation health programs (26 percent or 9 students).

EMPLOYMENT OR POSTGRADUATION PLANS

Of the known employment or postgraduation plans of the new graduates, 34 percent of the bachelor's were continuing study for a higher degree, 26 percent of the students went to work in nuclear utilities, and 11 percent were still seeking employment. (Table 1.) Twenty-two percent of the master's were continuing study, 15 percent went to work in medical facilities, and 10 percent were working at DOE contractor facilities (M&Os). For the new doctorates, 32 percent went to work in academia, and continued study and medical facilities represented 15 percent each.

Table 1. Employment or Postgraduation Plans of Health Physics Graduates by Degree Level, 1997 (Percent Distribution)

Employment or Postgraduation Plans	B.S.	M.S.	Ph.D.
Continued study	34%	22%	15%
U.S. academic employ.	5	5	32
Federal gov. employ.	2	6	0
DOE contractors (M&Os)	6	10	8
State and local gov. employ.	0	7	0
Medical facilities employ.	2	15	15
U.S. nuclear utility employ.	26	4	0
U.S. other industrial employ.	5	6	8
Employ. with foreign employer	0	2	3
U.S. military service	5	4	6
Other/Unknown	5	15	12
Still seeking employment	11	3	0
TOTALS	100%	100%	100%

NOTE: Percentages are rounded to nearest whole number.
Source: U.S. Department of Energy.

FOREIGN NATIONAL AND MINORITY PARTICIPATION

Two foreign nationals received bachelor's degrees. Master's degrees awarded to foreign nationals decreased by 2, from 23 in 1996 to 21, and doctorate degrees decreased from 13 to 9 students. The two bachelor's were reported as still seeking employment, and 9 of the master's were continuing study for a higher degree. Of the foreign national doctorates, 3 were continuing study, 2 were working in medical facilities, and 1 went to work for a foreign employer. (See Table 2 for percent distribution of foreign nationals.)

Degrees awarded to minorities (excluding foreign nationals) in health physics programs remained low in the 1 to 6 percent range, with Hispanic American master's degree recipients increasing from 6 in 1996 to 10 students. (NOTE: In 1997, ethnicity data were collected for degrees only.)

Table 2. Percentage of Health Physics Degrees Awarded to Foreign Nationals, 1993-1997

Year	B.S.	M.S.	Ph.D.
1993	1	16	53
1994	2	15	46
1995	2	17	51
1996	0	11	26
1997	3	12	26

Source: U.S. Department of Energy.

Table 3. Health Physics Enrollments and Degrees, by State and Institution, 1997

State	Institution	Enrollments			Degrees		
		Undergraduate	Master's	Doctoral	B.S.	M.S.	Ph.D.
ARIZONA	Arizona State University*	1	-	-	-	-	1
ARKANSAS	Univ. of Arkansas for Med. Sci. ¹	-	-	-	-	1	-
CALIFORNIA	San Diego State University	-	10	-	-	5	-
	San Jose State University**	-	27	-	-	4	-
	University of California, Irvine	-	-	6	-	-	-
	University of California, Los Angeles	-	2	43	-	3	3
	University of Southern California**	-	1	3	-	-	-
COLORADO	Colorado State University	-	5	5	-	12	2
	National Technological University	-	11	-	-	-	-
	University of Colorado HSC**	-	5	-	-	2	-
DIST. OF COLUMBIA	Georgetown University	-	22	-	-	3	-
FLORIDA	Florida A&M University	-	3	-	-	-	-
	University of Florida, Gainesville ²	-	22	7	2	11	2
GEORGIA	Georgia Institute of Technology	-	29	-	-	16	-
IDAHO	Idaho State University	18	26	2	-	2	-
ILLINOIS	Rush University	-	1	8	-	1	1
	University of Illinois, Urbana	-	2	3	-	4	-
INDIANA	Purdue University	17	4	3	8	1	1
KENTUCKY	University of Kentucky	-	10	-	-	6	-
LOUISIANA	Louisiana State University	-	10	-	-	8	-
MAINE	University of Maine	2	-	1	-	-	-
MARYLAND	Johns Hopkins Sch. of Public Health	-	1	2	-	-	2
MASSACHUSETTS	Harvard School of Public Health	-	-	3	-	1	4
	Massachusetts Institute of Technology	-	9	4	-	1	-
	University of Massachusetts Lowell	6	32	16	6	11	4
MICHIGAN	University of Michigan ³	-	21	2	-	11	1
MISSOURI	University of Missouri, Columbia	-	6	14	-	8	2
	University of Missouri, Rolla	4	1	1	2	-	-
NEVADA	University of Nevada	8	8	-	-	-	-
NEW JERSEY	Rutgers University*	-	10	7	-	2	2
	Thomas Edison State College	80	-	-	16	-	-
NEW MEXICO	University of New Mexico	-	10	-	-	3	-
NEW YORK	New York Univ. Medical Center	Inactive	-	-	-	-	-
	State Univ. of New York, Buffalo ¹	-	-	-	4	5	-
NORTH CAROLINA	East Carolina University	2	-	-	-	-	-
	Univ. of North Carolina, Chapel Hill	-	4	1	-	4	-
OHIO	Medical College of Ohio	-	8	8	-	-	1
	University of Cincinnati	-	14	-	-	11	-
	Ohio State University	-	7	6	-	5	1
OREGON	Oregon State University	15	9	3	8	8	-
PENNSYLVANIA	Bloomsburg Univ. of Pennsylvania	3	-	-	4	-	-
	Dickinson College	1	-	-	-	-	-
	University of Pittsburgh	-	3	6	-	-	-
SOUTH CAROLINA	Clemson University	-	15	6	-	7	-
	Francis Marion College	6	-	-	2	-	-
TENNESSEE	University of Tennessee, Knoxville	10	15	9	7	4	2
TEXAS	Texas A&M University	10	17	11	3	6	-
UTAH	University of Utah**	-	2	8	-	1	2
WASHINGTON	Washington State Univ., Tri-Cities	-	5	-	-	2	-
WISCONSIN	University of Wisconsin, Madison	-	26	20	-	11	3
TOTALS		183	413	208	62	180	34

*Program suspended; students are being allowed to complete their degrees.

**Estimated.

NOTES: ¹The programs at the University of Arkansas for Medical Science and the State University of New York, Buffalo are suspended; last degrees awarded in 1997.

²The undergraduate program at the University of Florida, Gainesville, was revised in 1997. All health physics students are now being classified as nuclear engineers.

³The number of health physics students within the environmental and industrial health department at the University of Michigan was estimated and included with the radiological health program numbers above.

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All opinions expressed in this report are the authors' and do not necessarily reflect policies and views of the U.S. Department of Energy or the Oak Ridge Institute for Science and Education.

Additional survey information, providing details by individual schools and by type of program, is available from:

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Manpower Brief # 43