

FUTURE FACULTY: WILL THEY BE THERE?

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In accepting The Distinguished Service Award, I want to thank my peers, colleagues, and friends for this very much appreciated recognition. I am honored to have my name among previous recipients.

After some thought regarding a topic for this occasion, I decided to investigate whether or not wood science academic programs are producing a sufficient number of Ph.D. graduates to meet projected faculty retirements. Information needed to assess the potential of a shortage was obtained through a survey of 28 U.S. and Canadian institutions with wood science programs. Of the 20 responses received, one was eliminated as the data included degree programs other than wood products. The results are shown in Table 1. Institutions responding were:

Auburn University
University of California
University of Georgia
University of Idaho
Iowa State University
Louisiana State University
University of Maine
University of Massachusetts
Michigan State University
Michigan Technological University
University of Minnesota
Mississippi State University
North Carolina State University
Oregon State University
Pennsylvania State University
Purdue University
SUNY, College of Environmental Science and Forestry
University of Tennessee
VPI and State University
West Virginia University

The total number of faculty in the 19 responding wood products programs was 138 (Table 1). The FTE distribution was 31.5% Teaching, 52.1% Research, and 16.4% Exten-

sion. As some institutions did not report the FTE distribution of their faculty, these percentages represent 120.9 positions rather than 138.

The number of faculty reported to be 55 years of age and older was 36 (Table 1). Thus, we can anticipate 36 retirements over the next 10 years if all 36 retire by age 65. Faculty attrition will also result from other factors (deaths, illness, tenure not granted, etc.). I am not aware of a way to determine faculty losses from these factors, nor can I anticipate the creation of new positions or elimination of existing positions. Thus, I have used retirement only for estimating the number of Ph.D. graduates required to fill faculty vacancies anticipated over the next 10 years.

The 15 institutions with Ph.D. programs indicated that, during the past five years, Ph.D. degrees were granted to 39 U.S. and 45 foreign citizens. Thus, the average number of degrees granted per year was 8 U.S. and 9 foreign citizens. Projecting out 10 years, 80 U.S. and 90 foreign Ph.D. graduates will be produced if enrollment remains about the same.

TABLE 1. *Summary of survey responses.*

Number of faculty	138
FTE*	
Teaching	31.5%
Research	52.1%
Extension	16.4%
Faculty 55 and Older	36
Ph.D. degrees granted past 5 years	
U.S. citizens	39
Foreign citizens	45
Current Ph.D. Enrollment	
U.S. citizens	25
Foreign citizens	49
1998/99 undergraduate enrollment	625

* FTE percentage based on 120.9 faculty.

From these data, an estimate of the number of graduates with both the interest and talent to succeed in an academic environment is required. Such an estimate relies more on intuition and experience rather than on available valid data. Therefore, supposing that one-third of U.S. graduates would have an interest in an academic career, then 26 potential candidates remain. Furthermore, assuming that one-half of these possess the required qualifications, only 13 are left. With foreign Ph.D. graduates, postulating that one-half are interested and that one-fourth have the necessary talent, 11 candidates result. Thus the surmised number of available Ph.D. graduates during the next 10 years is 24, 12 fewer than the estimated need of 36. Given that attrition due to factors other than retirement was not considered, the estimated deficit of 12 is most likely low.

Current enrollment of Ph.D. candidates was reported as 25 U.S. and 49 foreign. This enrollment level will not generate an increase in the number of U.S. Ph.D. graduates and may result in fewer. However, the number per year of graduates with a foreign background should increase slightly, perhaps to 51. Unless a significant increase in the number of Ph.D. graduates occurs, replacement of outgoing faculty with graduates of wood products programs does not appear likely.

Comments made by respondents to the survey regarding possible solutions to the probable shortage included the following:

1. Increasing undergraduate enrollment should result in an increase in graduate students.
2. Induce graduates from other curricula (engineering, chemistry, economics, etc.) to pursue graduate study in wood products.

3. Seek faculty from wood products graduates working in the industry, individuals retiring, or those seeking a change.
4. Must all faculty have a Ph.D.? Teaching and extension? Non-tenure track, short-term appointments.
5. Hire faculty from other professions (engineering, economics, botany, other sciences, etc.) and teach them the necessary fundamental knowledge of wood science.
6. Increase graduate student stipends.

The pros and cons of the suggested solutions are apparent. Whether or not Ph.D. production can be increased to meet anticipated demand by implementing the above-listed recommendations remains to be seen.

The survey also asked the institutions to record their undergraduate enrollment beginning with the 1998–99 academic year and the percent of increase or decrease compared to the 1993–94 academic year. The bad news is that five institutions indicated that they no longer had an undergraduate program. The good news is the significant increase in undergraduate enrollments since 1993–94. Enrollment increased from 311 in Fall 1993 to 625 in Fall 1998. This represents more than a 100% increase. Evidently, recent efforts to increase undergraduate enrollments have met with considerable success.

Unfortunately, I am not able to offer solutions to this apparently looming shortage of Ph.D. graduates. It is easier to point out problems than to solve them. I hope that this report, having shown that the problem exists, will stimulate positive actions leading to a resolution.

Again many thanks for honoring me with this award. I am deeply appreciative.