

SCIENCE

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GRADUATE WORK IN MATHEMATICS IN UNIVERSITIES AND IN OTHER INSTITUTIONS OF LIKE GRADE IN THE UNITED STATES¹

I. THE ESTABLISHMENT OF ADVANCED INSTRUCTION IN THE UNITED STATES

FORTY years ago the bachelor's degree granted on the completion of a four years' course of a general character marked not merely the close of a young man's liberal education, but also, except in the case of some lawyers, ministers and physicians, the end of all academic instruction of any kind. In particular, apart from a few exceptional cases, no advanced instruction in mathematics was anywhere provided beyond the usually rather meager ingredients—hardly more than analytic geometry and a little calculus—of this college course, which consisted mainly of prescribed studies. As an external sign of this state of affairs we note that the master's degree, where it existed, was conferred for reasons having very little to do with study, while the doctor's degree was practically non-existent.² The desire for higher education in America, which had been felt for many years by some of the leading minds of the country, had been able so far to achieve only momentary and sporadic success.

¹General report of the committee consisting of Professor Maxime Bôcher, Harvard University, Cambridge, Mass., *chairman*; Professor D. R. Curtiss, Northwestern University, Evanston, Ill.; Professor Percy F. Smith, Yale University, New Haven, Conn., and Professor E. B. Van Vleck, The University of Wisconsin, Madison, Wis. The report is Bulletin No. 6 (1911) of the United States Bureau of Education.

²Except at Yale University, where the degree of doctor of philosophy was established in 1860.