

Osgood, William Fogg | Encyclopedia.com

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(*b.* Boston, Massachusetts, 10 March 1864; *d.* Belmont, Massachusetts, 22 July 1943)

mathematics.

Osgood was the son of William Osgood and Mary Rogers Gannett. After preparing for college at the Boston [Latin School](#), he entered Harvard College in 1882 and was graduated second in his class in 1886. He remained at Harvard for a year of graduate work in mathematics and was awarded the A.M. in 1887. Osgood spent much of his first two years at Harvard studying the classics but was largely influenced by the mathematical physicist Benjamin Osgood Peirce, one of his favorite teachers, and by Frank Nelson Cole. Cole had attended [Felix Klein](#)'s lectures on function theory and lectured on the subject, following Klein's ideas, at Harvard during 1885–1887. Osgood went to the great German center of mathematics at Göttingen in 1887, largely because of Klein's presence there.

In 1887 there was great mathematical activity in Europe, brought about especially by the introduction of rigor into current research. Under the influence of Klein, Osgood embraced this tendency, which remained a commitment throughout his life. Osgood went to Erlangen in 1889 to continue his graduate work. His dissertation, a study of Abelian integrals of the first, second, and third kinds, was based on previous work by Klein and Max Noether. The topic was part of the theory of functions, to which Osgood devoted much of his later life. After receiving his Ph.D. at Erlangen in 1890, Osgood married Anna Terese Ruprecht of Göttingen and returned to the [United States](#). He then joined the Harvard department of mathematics, where he remained for forty-three years. He brought with him the spirit of research, then new in the [United States](#), as well as that of rigor. A year later Maxime Bôcher returned to Harvard, and the two were influential in fostering the new attitude there.

Osgood's main research papers concerned convergence of sequences of continuous functions, solutions of differential equations, Riemann's theorem on the mapping of a simply connected region, the calculus of variations, and space-filling curves. These topics are classical, and Osgood's results are important and deep. Klein invited Osgood to write an article for the *Encyklopädie* on the theory of functions; the writing of it (1901) gave Osgood an unparalleled knowledge of the field and its history. His *Lehrbuch der Funktionentheorie* (1907) subsequently became the standard treatise. Osgood was one of the world's outstanding mathematics teachers through that work and through others on [analytic geometry](#), calculus, and advanced calculus. Over the years he instilled ideals and habits of careful and accurate thought in hundreds of elementary as well as advanced students. After his retirement from Harvard in 1933, he lectured for two years at the National University of Peking.

Osgood's favorite recreations were travel by car, smoking cigars, and occasional games of tennis and golf. He was kindly although somewhat reserved, but warm to those who knew him. He and his first wife had two sons and a daughter. He married Celeste Phelps Morse in 1932.

BIBLIOGRAPHY

Personal recollections; Harvard Class of 1886 *Reports* for 1886, 1889, 1894, 1898, 1901, 1906, 1911, 1926, 1936; and clippings in [Harvard University](#) Archives. See also *Dictionary of American Biography*, supp. 3, 574–575.

J. L. Walsh