

Albert E. Church

- Born 16 December 1807
- July 1824: entered USMA at the age of sixteen
- 1828: graduated USMA and commissioned a Second Lieutenant in the Artillery
- 1828-1831: Assistant Professor of Mathematics, USMA
- 1831-1833: served as an Artillery officer at Newport, Rhode Island and Fort Independence, Massachusetts
- 1833-1837: Principal Assistant Professor of Mathematics, USMA
- 1837-1878: Professor of Mathematics, USMA
- Died 30 March 1878 at West Point, New York, age 70

Albert E. Church was born on December 16, 1807 in the town of Salisbury, Connecticut. His father, Samuel Church was a distinguished Chief Justice of the Supreme Court of Connecticut. As a young man Albert was groomed for the legal profession and was scheduled to enroll in Yale College after completion of his secondary education.

In 1824 Church received an appointment to the United States Military Academy at West Point, New York. The appointment came from the Secretary of War, John C. Calhoun, who was a classmate of his father's at Yale College. This appointment was to change his whole course of life and he entered the Academy in July of 1824.

As a cadet, he devoted himself completely to his academic studies and was determined to graduate high in the class. This ambition and his hard work led him to graduate at the head of his class in 1828. There were not any vacancies in the Corps of Engineers in that year so he accepted his commission as an artillery officer. On the recommendation of Sylvanus Thayer, Church remained at the Academy after graduation as an Assistant Professor of Mathematics from 1828 until 1831.

In 1832 Church left the Academy to join his artillery regiment. He was initially stationed at Newport, Rhode Island and then at Fort Independence, Massachusetts in Boston Harbor. During the latter part of 1833 he was recalled to the United States Military Academy and was appointed the Principal Assistant Professor of Mathematics under Professor Charles Davies.

On the resignation of Professor Davies Church was appointed to succeed him as Professor of Mathematics in 1838. As the Professor of Mathematics Professor Church greatly influenced the way the subject was taught at the Academy. The classroom was organized into ten to twelve man sections and was regimented and disciplined. Repetition and the oral recitation of solutions to problems became the principal methods of mathematical instruction. Professor Church was often accused of teaching more form than content. Finding some of the textbooks used at the Academy abstract and incomplete, Church wrote his own textbooks to replace the ones used. In 1842 he published his Elements of the Differential and Integral Calculus, in 1851, Elements of Analytical Geometry, in 1857, Elements of Analytical Trigonometry, and in 1865, Elements of Descriptive Geometry. All four of these texts were used in the mathematics program during his tenure as Professor of Mathematics.

As a teacher, Professor Church was viewed with mixed emotions. Morris Schaff, a USMA graduate, described Professor Church as "an old mathematical cinder, bereft of all natural feeling", and Cadet Arthur Harding, later to become prominent as a mathematician at Dartmouth complained " He did not inspire me - he had no magnetism - was as dry as dust, as his textbooks." On the other hand, future generals David S. Stanley and John C. Tidball found Professor Church to be a patient and helpful teacher willing to help a struggling cadet if there was the faintest hope that the cadet could master the material.

As a member of the Academic Board, Professor Church was bothered by the number of cadets who were failing mathematics. With the support of his colleagues, Professors Mahan and Bartlett, his solution to this problem was not to diminish the content of the mathematics course, but instead to eliminate more of the non-scientific subjects from the curriculum. This would enable cadets to devote more hours to the study of mathematics and science. These three Professors shaped the curriculum at the Academy for over thirty years never yielding to the demands for less mathematics and science courses.

During his tenure as Professor of Mathematics, Professor Church continued his own development. In 1852 he received his law degree from Yale College and served as Staff Judge Advocate at the Academy. He continued to write and publish textbooks. One year before his death, he commenced to rewrite Davies' Bourdon's Algebra. It was to be his last publication. Professor Church died on 30 March 1878 still holding the position of Professor of Mathematics at the United States Military Academy.

Publications:

Elements of the Differential and Integral Calculus, 1842.

Elements of the Differential and Integral Calculus with the Calculus of Variations, 1851.

Elements of Analytical Geometry, 1851.

Elements of Analytical Trigonometry, 1857.

Elements of Descriptive Geometry, 1865.

Plane and Spherical Trigonometry, 1879.

Bourdon's Algebra, 1879.

References:

Annual Reunion of the Association of Graduates, 13 June 1878, page 52.

Appleton's Cyclopaedia of American Biography, Volume I, D. Appleton and Company, 1888, page 612.

Cajori, Florian, Teaching of Mathematics in the United States, Washington: Government Printing Office, 1890.

Cullum's Register, Volume I, pages 404-406.

Morrison Jr., James L., The Best School in the World, Kent State University Press, 1986.

National Cyclopedia of American Biography, Volume 4, James T. White and Company, 1897, page 484.

Who Was Who in America, Volume 7.