

Edgar Wales Bass

- Born 30 October 1843
- 15 June 1868: graduated USMA and appointed Brevet Second Lieutenant in Corps of Engineers
- Aug 1869-Feb 1874: Assistant Professor of Natural and Experimental Philosophy, USMA
- Mar 1874-Sep 1875: Assistant Astronomer of US Expedition to New Zealand to observe transit of Venus
- Sep 1876-May 1878: Assistant Professor of Natural and Experimental Philosophy, USMA
- May 1878-Oct 1898: Professor of Mathematics, Head of Mathematics Department, USMA
- Died 6 November 1918, age 75

Edgar Wales Bass was born at Prairie du Chien, Wisconsin on 30 October 1843. At the age of four his family moved to St. Paul, Minnesota where Bass attended public schools. On 13 August 1862, he entered the military service as a Private in Company K, Eighth Minnesota regiment, U.S. Volunteers. In December of the same year he was appointed Quartermaster Sergeant. His enlistment coincided with the "Sioux Indian outbreak". He served against the Sioux Indians and was discharged 30 June 1864 to begin his appointment as a cadet at USMA. He graduated USMA 4th in a class of 54 on 15 June 1868. Upon graduation, he was commissioned a Brevet Second Lieutenant in the Corps of Engineers.

Lieutenant Bass was initially assigned to the Engineer Battalion at Willet's Point, New York. He served there until August 1869 when he was selected to fill the position of Assistant Professor of Natural and Experimental Philosophy at USMA. His selection and return to USMA came at an unusually early age. He remained at USMA until March 1874 when he participated in the celebrated expedition of the United States to New Zealand to observe the transit of Venus. Upon his return in September 1875, Captain Bass commanded the Engineer Company and then was the Battalion Adjutant at Willet's Point, New York. In September 1876, he returned to USMA as Assistant Professor of Natural and Experimental Philosophy. On 2 May 1878 he was appointed Professor of Mathematics, Head of the Mathematics Department.

Professor Bass succeeded as Head of the Mathematics Department an honored incumbent, Professor Albert E. Church. Professor Church's tenure as department head was for forty-one years. During this long period, Professor Church rewrote the majority of the textbooks used in the mathematics courses of instruction at USMA. These textbooks were then used by many other institutions in America. However, Professor Bass was not satisfied with the clearness of language and simplicity of certain fundamental definitions and concepts from Church's textbooks.

Professor Bass joined the best American mathematicians of their day in superseding these "old definitions" in both American and European works. Furthermore, Professor Bass disagreed with the method of instruction for differential calculus. Professor Bass was of the belief that it should be presented as the "science of rates." This was the same concept used by some of the first teachers of calculus. One of Professor Bass' significant contributions to the field of mathematics was the textbooks that he wrote. Since 1843, USMA had been using Albert Church's text on

calculus. Professor Bass spent many years writing a calculus textbook. As portions of it were finished, he had them published as pamphlets and issued to the cadets to supplement Church's book. In 1896, Bass' Elements of Differential Calculus replaced Church's text, a book that had been used for over fifty years at USMA.

Captain (retired) Metcalfe, a former classmate of Professor Bass' depicts Professor Bass as an "exceedingly accurate mathematician, a devout West Pointer" who was instrumental in developing the efficient method of teaching mathematics at West Point. Professor Bass was also characterized as being "alert, decided, punctilious, his standards of performance and deportment were high and he had no toleration of slacking in either. Though a strict, severe, disciplinarian, no man was ever really more helpful to his pupils, no one fairer or more just. He was determined, and in that determination he was eminently successful that every West Pointer should know mathematics of the soldiers' profession." As a former student stated, "...the hardest task of the cadet was to win a victory over 'math' with Colonel Bass entrenched in the classroom."

In October 1898, due to the severe worsening of his eyesight, Professor Bass retired as the Head of the Mathematics Department and from the Army. He resided for the next twenty years at Bar Harbor, Maine and in New York City. On 6 November 1918, Edgar Wales Bass, age 75, died from the illness of pneumonia.

Publications:

"Introduction to Differential Calculus" 1887

Elements of Trigonometry (Ludlow) 1888

Elements of Differential Calculus 1896

References:

Annual Reunion of the Association of Graduates, 10 June 1919, page 144.

Cullum's Register, Volume III, page 108.

Memorial, Commandery of the State of Minnesota, 10 December 1918.

New York Times, 7 November 1918, page 15, column 4.

Who's Who in America, Volume I.