

# William Chauvenet

William Chauvenet (1820-1870) was a mathematician and scientist who was instrumental in founding the United States Naval Academy.

He established the basis of modern naval education.

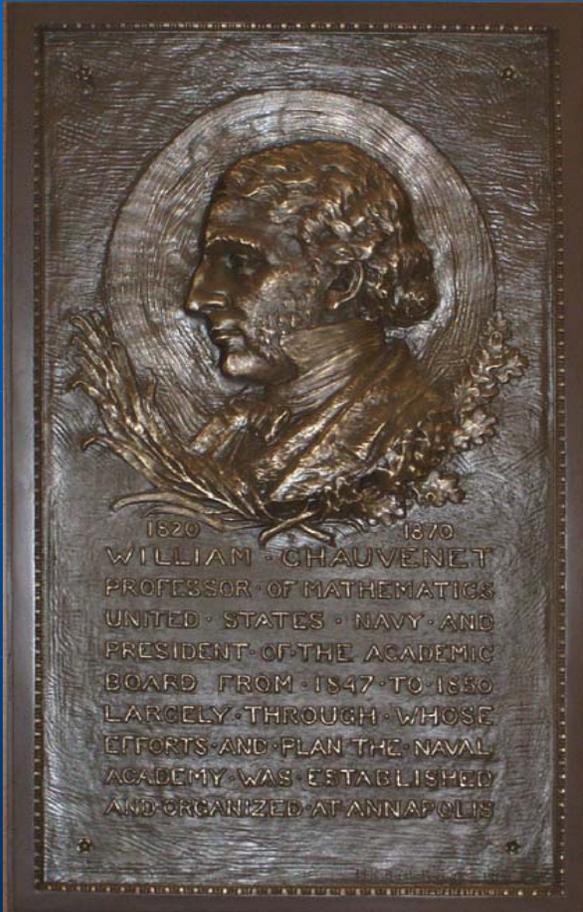
Chauvenet Hall, home to the Mathematics and some Science departments, is named in his honor.

William Chauvenet is enshrined in the pages of American Naval History. As a leader, a teacher, a scholar, and above all as a man, he will remain forever an inspiration to the midshipmen, the faculty and the graduates of the United States Naval Academy.

USNA Alumni magazine *Shipmate*, 1969

Professor Chauvenet was responsible, more than any other one man, for the solid beginning of the Naval Academy.

Secretary of the Navy Colonel Frank Knox, 1940



Bronze plaque at the Naval Academy and Washington University in St. Louis



Chauvenet Hall

# William Chauvenet

**Early Years:** William Chauvenet was born near Milford, Pennsylvania in 1820. From an early age he showed mechanical aptitude as well as striking talent in mathematics, music, and languages. He entered Yale University at age 16 and graduated four years later with high honors in mathematics and classics. He then conducted research in meteorology, magnetism, and astronomy at Girard College in Philadelphia.

In 1841 Chauvenet married Catherine Hemple of Philadelphia; they would have five children.

**Naval Asylum School:** Also in 1841, the Navy hired Chauvenet as professor of mathematics. He taught courses at sea briefly, and then moved to the Naval Asylum School, a shore-based facility in Philadelphia, where midshipmen studied basic knowledge for eight months. He was promoted to head the school in 1842, and he immediately instituted a series of improvements to the academic program.

**United States Naval Academy:** William Chauvenet helped convince Navy Secretary George Bancroft and the U.S. Congress to move the Navy's school to Annapolis, Maryland in 1845 and re-establish it there as the U.S. Naval Academy. Chauvenet was the driving force behind the academic changes at the new Academy. He expanded the course of study from eight months to four years and served as professor of mathematics, astronomy, navigation, and surveying. His texts on those subjects were widely used across the United States and remained in print well into the 20<sup>th</sup> century. He also invented the Great Circle Protractor that navigators use to find great circle routes, much like Mercator projections aid in finding rhumb line routes.

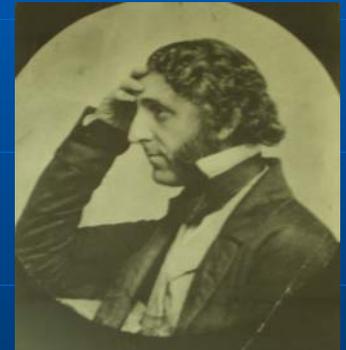
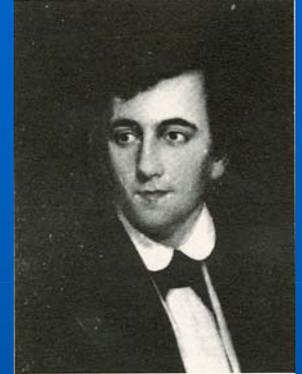
Chauvenet was the first Librarian of the Naval Academy and built the first astronomical observatory on Academy grounds. He was also an early proponent of summer training cruises for midshipmen and of bringing back outstanding alumni to serve as instructors at the Academy.

He is the ablest mathematician and astronomer which Yale has produced.

Florian Cajori, 1889

I drew up a plan for the expansion of the institution into a regularly organized school in which all the subjects conceived to be indispensable to the naval officer were to be taught under competent instructors.

William Chauvenet



# William Chauvenet

**Beyond the Naval Academy:** In 1859 Chauvenet left the Naval Academy to become the chair of the mathematics department at Washington University in St. Louis. Three years later he became chancellor of Washington University. He performed some of the calculations needed for the design and construction of the famous Eads Bridge across the Mississippi River in St. Louis.

Chauvenet was a major figure in 19<sup>th</sup> century American science. He served as vice president of the National Academy of Sciences and president of the American Association for the Advancement of Science. He was a member of both the American Philosophical Society and the American Academy of Arts and Sciences.

Chauvenet died in 1870 after a long illness.

**Navy Honors:** Two ships of the U.S. fleet have been named for Chauvenet. The first served as a minesweeper during World War II. The other was the first of a new class of survey ships launched in 1968. In that same year the Naval Academy dedicated Chauvenet Hall to house the Mathematics and some Science departments at the Naval Academy.

**Chauvenet Prize:** The grace and style of Chauvenet's clear writing was much admired by students and mathematicians. In his honor the Mathematical Association of America established the annual Chauvenet Prize in 1925. The prize is awarded annually to the author of an outstanding expository paper in mathematics. It is the highest award for mathematical writing in the United States.

Chauvenet had a power of expression and purity of language unexcelled in American scientific literature.

W. H. Roever, 1926

## References:

Wm H. Roever, William Chauvenet, *Science* (New Series) Vol 64 No. 1645 (1926) pp 23-28.

J. A. Tierney, William Chauvenet, Father of the Naval Academy, *Shipmate* Vol 32 Sept/Oct 1969, pp 6-11.

Wm Chauvenet, letter to Thomas G. Ford, Oct 1860, History of the Origin of the U. S. Naval Academy.

**Prepared by:** Mark Meyerson and T. S. Michael,  
USNA Mathematics Department [mathweb3@usna.edu](mailto:mathweb3@usna.edu)



The USS Chauvenet



Construction of the Eads Bridge in St. Louis

