

= Thayer School of Engineering =

Thayer School of Engineering offers graduate and undergraduate education in engineering sciences at Dartmouth College , Hanover , New Hampshire , United States . The school was established in 1867 with funds from Brig. Gen. Sylvanus Thayer , known for his work in establishing an engineering curriculum at the United States Military Academy at West Point , New York . Located in a two @-@ building complex along the Connecticut River on the Dartmouth campus , the Thayer School today offers undergraduate , master 's , and doctoral degrees , as well as dual @-@ degree programs with other local institutions . Over 500 students are currently enrolled at Thayer , overseen by a faculty of 56 and preceded by over 4 @,@ 500 living alumni of the school . In 2016 Thayer became the first US national research university with a graduating class of engineering undergraduates that was over 50 % female .

= = History = =

Thayer School is named for Sylvanus Thayer , an alumnus of Dartmouth in the class of 1807 . Thayer was known as " the father of West Point " for his sixteen @-@ year superintendency of the United States Military Academy at West Point , New York , where he developed an extensive engineering curriculum unlike any other in the United States at the time . After thirty years of professional service in the Army Corps of Engineers , Thayer endowed Dartmouth College with \$ 40 @,@ 000 in 1867 (and increased the gift to \$ 70 @,@ 000 by 1871) for the establishment of a school of engineering initially called the Thayer School of Civil Engineering .

The school opened four years later , in 1871 , with six students . The curriculum borrowed heavily from the model which Thayer himself had developed at West Point ; graduates of the two @-@ year program were awarded a degree in civil engineering (C.E.) . Though Robert Fletcher , the first director and dean of the school , was also its only instructor for several years , the enrollment , funding , and faculty of the School increased markedly throughout the late 19th and early 20th centuries .

Under the administration of Frank Warren Garran (dean of the School from 1933 to 1945) , Thayer experienced extensive expansion and modernization . Thayer 's curriculum expanded to incorporate mechanical engineering and electrical engineering , as well as a dual business / engineering administration degree from the Tuck School of Business . Garran also oversaw the establishment of Cummings Hall , the Thayer School 's first dedicated physical plant , and the institution of the school 's first major research program , which was in radiophysics . Dean William P. Kimball (1945 ? 61) continued the school 's growing emphasis on research and established the first master 's degrees for students wishing to earn more than a Bachelor of Engineering .

In 1961 , Myron Tribus became dean of the School , placing a heavy emphasis on the practical , problem @-@ solving aspects of engineering as well as the traditional , theoretical base of the discipline . Tribus developed an integrated curriculum and introduced design courses to the school to provide Thayer students with real @-@ life experience in creative applications of engineering . Under Tribus , the Thayer School offered its first doctorates in engineering .

From the 1970s to the first decade of the 21st century , the Thayer School saw expansion into new fields such as nanotechnology and biochemical engineering , as well as collaboration with such nearby institutions as Dartmouth Medical School , the Dartmouth @-@ Hitchcock Medical Center , and the Cold Regions Research and Engineering Laboratory . In the early first decade of the 21st century , the core curriculum for undergraduates was revamped under Dean Lewis Duncan (1998 ? 2004) , making the school 's offerings more accessible to non @-@ major Dartmouth students . The MacLean Engineering Sciences Center (ESC) , completed in 2006 , was a \$ 21 million project to expand the school 's classrooms and research centers .

= = Campus = =

The Thayer School is located on the campus of Dartmouth College , which is situated in the rural ,

Upper Valley New England town of Hanover , New Hampshire . The campus of the Thayer School sits in a complex on the west side Dartmouth 's campus near the Connecticut River . When classes first began in 1871 , Sylvanus Thayer 's endowment had not provided for a physical plant . Consequently , the school was an itinerant institution for many years , occupying parts of various College buildings and , at one point , a former structure of the New Hampshire College of Agriculture and the Mechanic Arts .

In 1938 , Dartmouth president Ernest Martin Hopkins successfully lobbied the Board of Trustees to construct an independent facility for the school . \$ 200 @,@ 000 were spent to build Horace Cummings Memorial Hall , which with several major additions (built in 1945 @-@ 46 and 1989) served as Thayer 's only facility for nearly 70 years . In 2004 , construction began on the MacLean Engineering Sciences Center (ESC) , which was completed in 2006 . At the cost of nearly \$ 21 million , the new center adds both classroom and research space to the Thayer School .

The Thayer School shares the Murdough Center (containing the Feldberg Business & Engineering Library) with the adjacent Tuck School of Business .

= = Academics = =

The Thayer School serves as both Dartmouth College 's undergraduate department of engineering , as well as a graduate school offering advanced degrees . Undergraduate majors can receive their Bachelor of Arts degree in engineering at the school , and may choose to continue on to earn a Bachelor of Engineering (B.E.) degree in an additional year or less . Thayer also offers a dual @-@ degree program for undergraduates at other colleges who wish to earn their bachelor 's degree at their home institution and their B.E. at Thayer . As a College academic department , the school 's undergraduate offerings are open to any Dartmouth student , including non @-@ majors .

Thayer offers several graduate degree programs , including a Master of Engineering (M.Eng) in Biomedical Engineering , Master of Science (M.S.) , and Doctor of Philosophy (Ph.D) in engineering . The school also offers a Master of Engineering Management (M.E.M.) degree in conjunction with the adjacent Tuck School of Business , and a combination Ph.D / Doctor of Medicine (M.D.) from Dartmouth Medical School . The school also has the United States ' first engineering Ph.D. Innovation Program .

= = = Research and entrepreneurship = = =

The Thayer School emphasizes the cross @-@ disciplinary nature of its research topics . In 2007 , sponsored research at the school amounted to \$ 16 @.@ 2 million . Research at Thayer is divided into three general " focus areas " : engineering in medicine , energy technologies , and complex systems . Projects within each focus area are divided by three " research categories " : biomedical , biochemical , chemical & environmental engineering (BBCEE) , electrical & computer engineering , & engineering physics (ECEEP) , and materials & mechanical systems engineering (MMSE) .

The Thayer School promotes its connections to engineering entrepreneurship . The Cook Engineering Design Center , founded in 1978 , acts to solicit industry @-@ sponsored projects for degree candidates to work on . The school also offers a variety of conferences , programs , and internships to foster student connections to the professional world . Companies and products that have emerged from the Thayer School include emeritus professor Robert Dean 's Creare , Inc. and Dartmouth music professor Jon Appleton 's work on the Synclavier synthesizer . The school maintains a list of startup companies established by its current faculty .

= = = Rankings and admissions = = =

In 2007 , the Thayer School was ranked 47th by U.S. News & World Report among American engineering schools . It was also included in BusinessWeek 's unranked list of 60 " Best Design Schools in the World " .

Admissions for undergraduate students are handled by Dartmouth College 's Office of

Undergraduate Admissions . Admission to graduate programs , including the B.E. degree , requires an undergraduate background in engineering and mathematics or science . In the fall of 2006 , Thayer accepted 14 @. @ 5 % of applicants overall . Average Graduate Record Examination (GRE) test scores of applicants in verbal , quantitative , and analytical sections were 601 , 778 , and 695 , respectively .

= = People = =

= = = Student profile and student life = = =

As of the 2007 ? 2008 academic year , the Thayer School has an enrollment of 354 students : 107 undergraduates , 62 doctoral candidates , 27 B.E. students , 76 M.E.M. students , 20 M.S. students , and 13 student pursuing special studies . The school offers a number of professional and community service student groups , as well as social life governance councils for the student body .

= = = Faculty = = =

The Thayer School currently claims 74 active instructors , including 29 tenured or tenure @-@ track faculty , 16 research or instructional faculty , 22 adjunct faculty members , and seven lecturers . Notable former faculty include Arthur Kantrowitz , emeritus professor of engineering , and Myron Tribus , the dean of the Thayer School for most of the 1960s .

= = = Alumni = = =

As of 2007 , Thayer has 4 @, @ 046 engineering alumni in all 50 U.S. states and over 50 countries . Nearly 3 @, @ 000 of the graduates received a B.E. or a graduate degree , with the remaining 1 @, @ 000 earning only the undergraduate A.B. degree .