

# Virginia Aviation History Project



## Virginia Tech Airport Civilian Pilot Training Program

Linda Burdette

On August 8, 2006, the Virginia Aeronautical Historical Society and the Virginia Dept of Aviation unveiled a historic marker commemorating the Virginia Tech Airport's legacy to aviation in America. The main speaker at this event was Howard Graninger, 85, who on June 2, 1940, became one of the first two students to earn his pilots license from the flight training program hosted by Virginia Polytechnic Institute. Mr. Graninger's reminiscences made the day especially memorable and illustrated the hopes and dreams of the young men who made this program successful.

It was 1938 and Europe was gearing up for war. For several years, certain European countries, especially Italy and Germany, had been spending large amounts of government funds to train thousands of young people to become pilots. These programs were touted as civilian programs intended to encourage general aviation, but they were, in fact, nothing more than military flight training academies. The United States, of course, hoped to avoid entanglement in the friction building in Europe and was slow to respond to this increasing air threat. Finally the Civil Aeronautics Act of 1938 contained language authorizing and funding a trial program for what would evolve into the Civilian Pilot Training Program (CPTP). President Franklin D. Roosevelt announced on December 27, 1938, that the



*photo courtesy of Al Orgain*

1940 CPTP Graduate Howard Graninger



renovated airport was officially opened on Saturday, December 16, 1939, with 73 members of Tech's cadet corps and officials of the school present.

Howard J. Graninger was a Junior at VPI that year. Growing up in Arlington, Virginia, he dreamed of flying. His childhood heroes were Buck Rogers in the comics and Charles Lindberg after his historic trans-Atlantic flight in 1927. Before September 1939, he'd already had some flight training. Bob Garst, who later became a CPTP instructor, would fly a J-3 Piper Cub up from Roanoke to Blacksburg and give flight instruction on the grass strip at the VPI Airport. The instruction was \$6 an hour and Graninger reported that after two hours fifteen minutes instruction, Bob got out of the airplane and told him to shoot a couple of landings solo.

Because of his prior experience in flying, Graninger was one of the cadets chosen to play a primary role in the December, 1939, ceremony opening the new runway. He and fellow Cadet R.S Ware were the first students to take off on training flights under the new program. While their classmates looked on, a high wind and extreme cold blanketed the field and hangar as, using two Fleet trainers, the two students took off simultaneously with instructors at the controls and spent thirty minutes in the air. By the end of December 1939, over fifty students had passed physical examinations for the course, which was open to all students in their sophomore through senior years. Most of those taking advantage of the program were enrolled in aeronautical engineering.

Instructors for the first class were Toby West of Richmond, Robert Garst of Roanoke, Bayne Grubb of Pulaski, and Cadet Kenneth Brugh, a VPI senior and transport Pilot. Ground instruction was headed by Dean Earl Norris of the engineering school.

The students taking the flight training had to pay a fee of \$40 to cover the cost of a physical examination and complete individual, liability and property damage insurance. Students had to provide their own personal flying equipment, including helmet and goggles. The College supplied parachutes.



Cadets at Va. Tech Airport. (L to R) Bob Garst, Ken Brugh, Toby West, Al Preissner, and Bayne Grubb

The standard instruction was that necessary to qualify students for a private pilot's certificate. It included 35 to 50 hours of dual and solo flight instruction and 88 hours of ground school instruction. The instruction was divided into two courses. The first course was the flight instruction and students received one credit hour for the complete flight instruction. The second course was the ground school instruction, for which the students received three credit hours per quarter. It included instruction in Civil Air Regulations, the history of aviation, aircraft and theory of flight, meteorology, parachutes, navigation, aircraft

engines, instruments and radio use. Graninger pointed out that the CPTP program was very different from instructions offered by some instructors at that time. The CAA had strict requirements for the curriculum and were much more cautious in allowing students to fly unaccompanied. It required a minimum of eight hours before solo which Graninger approved, especially after his earlier solo with only two hours of instruction. He points out that the 8 hour requirement gave the student pilot time to be trained and to be much more qualified to be in the air all by himself.

One professor of whom Graninger speaks fondly is Joseph Ware, Jr. Joe Ware was a 1937 graduate of Virginia Tech's Department of Mechanical Engineering, having received one of the first Aeronautical Option Mechanical Engineering degrees offered by the University. He was the aeronautical engineering professor for the first class of CPTP students. He subsequently earned a Master's degree from Cal Tech and spent his career with Lockheed Corporation. He was recently recognized by Virginia Tech for his contribution which resulted in the Joseph Fulton Ware, Jr. Advanced Engineering Laboratory.



VAFS Archives

Training Aircraft  
December 17, 1941

The Civil Aeronautics Authority regulations required a CPTP-participating flight school to own one aircraft for every ten students enrolled in the program. (Note: VPI began with four airplanes and 50-80 students, a situation that continued for at least one year. Apparently, with aircraft production shifting to military aircraft vice general aviation aircraft, the CAA elected not to strictly enforce this regulation.) Furthermore, the CAA requirements specified for the training aircraft were very strict and excluded many types of aircraft available at that time. VPI adopted the Fleet training planes which were especially designed as a medium weight training plane and were extremely well adapted to student instruction. The two-place open cockpit bi-planes were equipped with

Warner, 125 horse-power, radial engines. They were able to cruise at 98 miles per hour, land at 47 miles per hour, and had a cruising range of approximately 315 miles. In designing the Fleet, the designers attempted to incorporate the flying and performance characteristics of a wide variety of airplanes. Afterward, the students were able to adapt easily to most types of general aviation aircraft.

Graninger reports that there was keen competition among the students in the first CPTP class to see who would be the first to solo. The two leaders were Graninger and Dave Pitts. However in 1940, during that first year, there was no transportation provided between the school and the airport. On March 21, 1940, as Howard walked the mile from the college to the airport, he saw Dave taking off in Fleet biplane NC8633 and taking the honors as the first student to solo. After Dave finished, Howard followed with his own solos. And that's how Howard Graninger lost the race to be the first student to solo by losing the race to the airport. Howard and Dave Pitts continued their friendly competition and on June 2, 1940, both were awarded their private pilot licenses simultaneously by Thomas Gates, CAA Flight Inspector.

The success of the VPI program was recognized when on June 15, 1940, COL Earle B. Norris, dean of engineering, signed a contract with the Civil Aeronautics Authority to train an additional 60 pilots. This was a special summer course and was identical in every way to that offered during the academic session.

In mid-summer 1940, students from that first class received notice from the government advising that they had been selected for advanced flight training. This became known locally as CPTP Secondary and the majority of the class returned to Blacksburg to continue training. The pilots-in-training were housed on the college in the quadrangle barracks, fed in the faculty dining room, and provided per diem compensation. They were also provided transportation to and from the airport.

During that summer, the basic class had four aircraft in active training and the advanced students assisted with the aircraft and organized the flight line and refueling procedures. With four aircraft in active training, the flight line was processing six to eight flights per hour.

On September 1, 1940, the school received a Travelaire Sport Biplane, NC418W, with a 125 HP Warner Engine and the advanced training began, including training in aerobatics. This phase of advanced training required 40 hours of dual and solo flight.

Howard's advanced training was completed in January 1941 with 17 hours of dual and 27 hours solo. On January 25, 1941, he reported to the airport for a check-ride with the CAA inspector. It was cold, raining, and the field was muddy, but the flight went fine and upon returning Waco, F-model NC11270 to the flight line, he was approved. In the two CPTP programs, he had completed 81 hours of government financed instruction.

Three of the students from that first advanced class were recruited by Wright Aero and started work in 1941. Employment at Wright in the defense work exempted them from active military service, but much of the work they did found its way into military aircraft and certainly contributed immeasurably to the war effort.

During the early part of the war, the airport housed about 15 airplanes used for training pilots and navigators under the CPTP. The airport's main hangar, still in use today, was built in 1940. Shops, offices and classrooms were added in 1941, only months before the Japanese bombing of Pearl Harbor in Hawaii pushed the United States into the war. After the attack on Pearl Harbor and the US entrance into World War II, the CPTP changed forever, including the name. The Civilian Pilot Training Program became the War Training Service (WTS) and from 1942 to 1944 served primarily as the screening program for potential pilot candidates. Students still attended classes at colleges and universities and flight training was still conducted by private flight schools, but all WTS graduates were required to sign a contract agreeing to enter the military following graduation. After 1942, the Navy took over the operation to provide primary flight training for Navy pilots.

Training pilots was not the only contribution VPI made to the war effort or to general aviation. In March 1940, VPI received approval for a project, partly financed by the Works Progress Administration, to construct a north wing to the hangar to house a classroom and machine shops. Part of the material came from the old Tech gymnasium which was being dismantled. This program was a new initiative at the airport to train aircraft mechanics. In the end, this work outstripped the pilot training programs in the number of men trained in support of the war effort. Even in 1940, Defense planners realized that there simply were not enough mechanics to keep a war-time fleet in the air. They estimated that they would need 10 mechanics for every flying aircraft, and began a subsidized training program for mechanics. Virginia Tech Airport was selected as one of the first training sites. The program was started in 1940 with 10 instructors under the supervision of Tech's dean of engineering. Students were recruited from Virginia high school graduates under a program called the National Youth Administration. They were housed in barracks-style buildings at the airport. One hundred twenty-five students had billets, a dining hall, an infirmary, and a heating plant. The volunteers were paid \$30 a month while in training, but \$19.80 was withheld for their room and board. By March 1942, the eight-month course had trained 184 mechanics, 55 of whom went to work for the Glenn L. Martin Corp.

What was the final outcome of these programs?

The CPTP eventually expanded and by the program's peak, 1,132 educational institutions and 1,460 flight schools were participating in the CPTP. The CPTP / WTS program was phased out in the summer of 1944, but not before 435,165 people nationwide had been taught to fly.

During the course of the war, about 750 aircraft mechanics completed the National Youth Administration training program at Virginia Tech Airport. The program ended with the war's end in 1945.

Howard Graninger's interest in aviation never waned and he continued flying actively in private aviation until May 1978. He accumulated 1,241 total flight hours with a commercial license with single and multi engine land and instrument ratings.

And now there is a permanent reminder at the Virginia Tech Airport of the role it played in World War II, aviation in America, and improving the lives of countless young Virginians.



## Vikings conquered mysteries of Mars

**Thirty years ago, NASA Langley scientists engineered the first landings of spacecraft on the red planet.**

by Jim Hodges  
*Daily Press*

June 19 2006

HAMPTON — The call to Jim Martin came from the White House. President Ford was on the line with congratulations.

Looking back across the 30 years since the NASA Langley Research Center staff was trying to find a place for Viking to land on Mars, Joel Levine and Norman Crabill disagree about what happened next.

“Jim wouldn't take the call,” says Crabill, then the mission analysis and design manager for Viking. “He said, ‘Tell the president he can call back.’”

Levine, who is now in charge of Langley's ARES space-plane project, which he hopes will explore the atmosphere above Mars, recalls it this way: “He said, ‘Mr. President, excuse me, because I can't talk to you. I have a spacecraft to land on Mars.’”

Either way, a 200-million-mile, 10-month trip was threatened 30 years ago today when Viking I first entered its orbit around Mars in preparation for sending its lander to ground. Viking II was on its way from Earth. It was a magic moment for NASA Langley, which managed the two-launch, two-orbiter, two-lander mission that was the agency's most complicated, most ambitious undertaking to that point. Langley will celebrate the anniversary with a reunion of Viking veterans this week.

It was also a magic moment for science. “This is a mission that keeps living, that keeps providing data,” says Levine, who has been fixated with Mars since opening a science book in the sixth grade in Brooklyn and seeing a picture of the planet. “We're learning new things about Mars every week from analyzing Viking data.”