

AEROSPACE ENGINEERING AND MECHANICS

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Curtiss Cadettes Take Crash Course



The graduating class

Early in February of 1943, 102 carefully selected young women from all parts of the country arrived at the University of Minnesota, one of seven universities participating in a unique educational experiment. As employees of the Curtiss-Wright Corporation, they were hired to study aeronautical engineering and pledged to work for Curtiss-Wright upon completion of the course. The wartime program was an innovative solution to the aircraft company's steadily dwindling supply of graduate engineers. As employees, the young women were to be furnished room, board, tuition, and pocket money (\$10.00 a week), and expected to work a full 40-hour week- a massive 30 hours of classwork and 10 hours of supervised study-for a period of 10 months.

Old Shevlin Hall on the Knoll was converted from a barracks to a dormitory by simply replacing the urinals, painting the bunk beds pale green, and lining the walls with pink wooden lockers. The smaller rooms housed 14 young women and the two ballrooms held almost 40 each. The cafeteria in the basement served double duty as a study area in the evenings. There was a gang shower in the basement plus one enclosed tub for the very modest. (Needless to say, modesty soon became an inconvenient and time-consuming luxury!) In contrast to the Spartan nature of the private facilities, the main lounge, complete with vaulted ceiling, leaded windows, and fireplace, and the smaller "date lounge" were comfortable and attractively furnished. "Upstairs" women, penalized by a two-flight walk from showers and meals, were compensated by a beautiful balcony from which they could check out the frequent male visitors in the lounge.

Thus the Curtiss-Wright Cadettes, accompanied by their mascot, a devoted Springer Spaniel named "Rudder," were launched into a whole new world. Courses in drawing, structures, mechanics, aerodynamics, machine shop, stress analysis, materials and testing, aluminum fabricating (including a short course in riveting), and many more were designed to provide the background for an engineering career in an airframe factory.

One hundred additional women didn't make much of a splash on a campus as large as the University, but they made quite an impact on the engineering areas. In those days, the badge of an engineer was his slide rule hanging from his belt. The girls hung theirs from their notebooks until a few daring ones, tired of changing into jeans for machine shop and back into skirts for class, simply wore jeans all day. Many followed suit, thereby acquiring the traditional anchor for the slide rule and anticipating by about 25 years modern college chic. Many will remember the reputedly tough professor who strode into his first class and suddenly burst into uncontrollable laughter, eventually recovering to admit that he had never before faced 25 females wielding slide rules-or the several professors who had to conquer obvious stage fright for the first few weeks of class.

As a group, the cadettes were light-hearted, intelligent, innovative, independent, and adventuresome. Those who doubted the engineering capabilities of women were soon converted and the faculty began to enjoy their work. Before long they found they were teaching (and the students absorbing) material far more complex than the projected scope of the course. (In 10 months, the students earned approximately 2 1/2 years of college credit, all in engineering subjects.)

There were few dropouts. Nearly 100 fledgling engineers (and Rudder) went on to Columbus, Ohio in December of that year and the majority worked there until the end of World War II-many advancing to full engineering positions and some to supervisory roles. At the war's end, the Curtiss-Wright Cadettes fanned out literally all over the world. Some continued in engineering, others entered entirely different fields, but few will forget or regret the unique adventure they shared.

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