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# DAILY ENTERPRISE



## (U) HISTORY TODAY - March 25, 2016

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### (U) NSA recruiting — Creating an engineering co-op in 1955

(U) Recruiting a workforce with the technical skills to carry out its mission has always been a challenge for NSA. NSA started experimenting with co-op programs at several engineering universities in 1955.

(U) Under the co-op education model, college students split their time between academic study in a classroom and direct work experience. NSA borrowed the idea of a co-op program from private industry, but adapted it to fit into government requirements.



(U) Shelby Patterson, first commandant of the National Cryptologic School.

(U) The idea for a co-op program at NSA emerged during a discussion between management interns and their instructor. One of the interns, Richard Bernard, shared his experience as a co-op student at the University of Cincinnati while pursuing a B.S. degree in electrical engineering. Commandant of the National Cryptologic School Shelby Patterson learned of this discussion and arranged for Bernard to conduct a feasibility study on the possibility of a co-op program at NSA. Bernard visited several colleges on the east coast and determined there was initial interest.

(U) Next, Patterson and Bernard briefed the DIRNSA. The director, LTG Ralph Canine, was keenly aware of the agency's need for technical talent and quickly approved the concept.

### (U) Seeking college engineering majors

(U) The first skill NSA wanted to acquire through a co-op program was engineering. The first co-op students arrived in November 1955: four students from Northeastern University in Boston, Massachusetts and four from Drexel Institute of Technology in Philadelphia, Pennsylvania.

(U) The co-op education program in the 1950s was innovative for the agency and was especially important because of serious problems in recruitment and retention of employees at that time. In the 1950s, NSA was part of the general government civil service system. Under the civil service structure, NSA had to classify and grade its jobs in accordance with the federal occupational structure. Yet, about three-quarters of NSA's jobs did not exist on the federal list. For instance, there was no category for cryptanalyst; many people were classified as clerks even though their actual work required a much higher level of skill. Others were merely classified as professionals and limited in future advancement.

(U) The program grew rapidly. By 1955-1959, enrollment had increased to 52 students. Co-op students were nominated by the participating institution, with final acceptance reserved for NSA. The freshman year consisted of full-time study, followed by four years of alternating employment at NSA and college attendance. Students were assigned to the Office of Training Services for administration and for their work periods "detailed" to the operating areas. When students were at school, they were in a leave-without-pay status.



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(U) All students entered at the GS-3 level, with the possibility of promotion to GS-4 or GS-5, depending on academic achievement and work performance. Upon graduation with a B.S., a student could be appointed to engineering or other suitable positions within the Agency.

(U) "On-the-job" periods at NSA included jobs as technicians, laboratory assistants, and engineering aides. Work assignments included experience with high-speed digital computers and special purpose communications equipment -- not commonly available in those days.

(U) The NSA co-op "co-founder," Dick Bernard, completed 30 years at NSA and became a Senior Cryptologic Executive in the Research and Engineering Organization. He retired in 1985.

(U) To discuss historical topics with interesting folks, visit the Center for Cryptologic History's blog, [History Rocks](#) ("go history rocks").

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