

James W. Jones PE – Retired Professor SUNY Alfred
My contributions to Electromechanical Technology (1965-1991)
For the College's Centennial Committee Celebration commemorative book set to begin
in 2008.

These pages are about the origin of and my involvement with the development of the Electromechanical Engineering Technology Curriculum. It covers the period from the programs beginning when I was hired in 1965 to my retirement in 1991 and is continued to 2004 with input from my successors Alan Cocchetto and Nick Reitter.

In August of 1965, I was hired as an Associate Professor to develop a new curriculum known as Measurement Science Technology. The industrial scale and weighing companies proposed establishing a new curriculum to Dr. David Huntington, the seventh President of ASC, and George Whitney, the Dean of the School of Engineering. This group of companies foresaw a need for a source of students from a new type of curriculum where the graduates were technically "bilingual." They needed to be knowledgeable in both mechanical and electrical technologies and be able to interface the two. In essence, this new program's focus was related to the automation of mechanical machines, plants and the control system knowledge to make all components work automatically. Jim Brown, a retiree from the Sale and Weighing Industry taught the first year of the mechanical technology portion of the program. Charles Krebs was hired in 1996 to assume his position. It was my assignment to build a lab and develop courses to teach automatic control systems.

As part of my employment agreement, I worked at Howe-Richardson Scale Company in Clifton, N.J. during the summer of 1965 before coming to Alfred. After teaching for my first year at ASC, I then worked at Toledo Scale Company in Toledo, Ohio during the summer of 1966. The purpose was to learn the specific knowledge and skills graduates would need to be successful in this field. During the early years I was active in the National Scale Men's Association and in the summer 1966 offered a one-week seminar for the industry.

When I started, the School of Engineering was located in the Industrial Building on the Alfred University campus while the new building was under construction. AU renamed the building the McMahon Building when ASC moved into the new Engineering Building in January of 1969.

When I started, the technology in use at that time for control was to use many types of mechanical relay devices. I built a miniature three ingredient batching plant interfaced to a control system cabinet so the students could individually design control circuitry and test their designs. If the design did not work they could modify it with no catastrophic plant destruction. Later I constructed a miniature drilling-machine for the students to automate. Pneumatic control systems were integrated into the course to enhance the program in the early years of the program.

In 1968 I developed a paper on high-speed motion weighing using logic devices and load cells for the Scale and Weighing Industry. A grant allowed me to introduce discrete digital logic devices into the program in the early 1970's when this method of control technology was being used in the industry.

In 1972-73 the Measurement Science Technology curriculum changed its name to Electromechanical Technology. Many other control companies were offering

substantially higher starting salaries than the Scale Companies could afford to offer. It was a sad situation that an industry that foresaw a need for a completely new curriculum lost out in the technology program that they were responsible for starting.

In February 1974 four engineers (mostly ASC faculty) and myself who had Professional Engineering Registrations in NY formed an engineering consulting corporation, The Southern Tier Industrial Consultants. Bruce Bailey (president), Robert Boyd (vice-president), Thomas Hungerford (chairman of the board), James Jones (treasurer) and Gary Childs (secretary.) The purpose of the Corporation was to provide expertise in many disciplines of engineering to the surrounding area.

I have been an avid photographer since the late 1940s and had developed considerable photographic and darkroom experience. Because of this I was involved for a few years teaching in the photographic darkroom laboratory courses of the Audio Visual Curriculum with Robert Keough. I compiled a photo album about the School of Engineering that was presented to Dean George Whitney when he retired

In the mid 80's I received equipment grants to obtain first generation industrial computers known as Intel Development Systems. I attended many Intel Corporation training seminars so that I could effectively use the equipment and incorporate it into the program. With this equipment, the students could use an assortment of computer software languages to develop and design a control system and then download to a discrete system control computer chip. The computer chip was an 8-bit programmable controller that allowed the students to evaluate their system designs when connected to the operational plant. Al Cocchetto, a graduate of Purdue University, said that the EMET program at ASC had a networked computer system before Purdue. In 1985 I received an Outstanding Service Award for developing the Generic Computing System from the faculty and administration of ASC.

A Bachelor of Technology degree in Electromechanical Technology was first offered in 1989-90 and awarded in 1990-91 in conjunction with SUNY Binghamton. ASU began awarding the degree in 1991-92.

The history and development of the first Electromechanical Technology Curriculum would not be complete without including reminiscences from professors Alan Cocchetto and Nick Reitter. Alan M. Cocchetto was hired to take my place as the head of the EMET programs. He was able to obtain many grants during his tenure and maintain current state-of-the-art technology from 1986 to 1994 and enhanced the laboratory experience for the students. Nick Reitter was the third to assume the leadership of the program. From 1991 to 2004 he continued the tradition of updating the control programs and laboratory and continue to make the EMET curriculum unique. He was also involved with integrating some EMET philosophies into some of the EET courses. Graduates from the EMET Curriculum often enjoyed the highest salaries offered on campus for 39 years. Their individual memories and reminiscences are included on the following pages.