

The evolution of Central Connecticut State University's technology education curriculum: 1969 to 2009

October 2009 will mark the fortieth anniversary of CCSU's transition from the unit-shop model of industrial-arts (IA) teacher training to a curriculum based on technological concepts. Although the curriculum has evolved significantly since then, the 1969-1970 transition is probably the most radical change in the department's history. The basis of the "new Four-Year Curriculum in Industrial Arts" was a three-course sequence in materials, information, and energy. This was an explicit a rejection of the old model:

"To teach an introductory course, an intermediate course, and advanced course with their only distinction the size of the product or project made is no longer cogent, if it ever was."

—CCSC Industrial Education Departmental Philosophy and Goals (1969), p. 4

The new curriculum was partially skills-based and partly conceptual. "For example, while traditional woodworking may become obsolete, the concept that materials are processed to increase their value will remain." In addition to a 29-credit core, students were directed to take four elective courses to "make it possible for each student to elect areas of concentration." While some of these were advanced technical courses, students could also choose from such courses as handcrafts, driver education, traffic safety, the history of industrial education, and elementary-school IA. Meanwhile, woodworking *per se* was not available as a concentration; only one of the 26 elective choices was a woodworking course. Ten years later, the core curriculum was largely the same, but students would now select five courses from a list of 36.

In the early 1990s, the materials-information-energy model was replaced by production-communication-transportation. To make room for four new courses in these areas, the formerly separate woods, metals, and plastics processing courses were merged into a single course, and the number of required electives was reduced to two. An important innovation here was the addition of a 'capstone' course, Technological Enterprise.

One casualty of the 1969 transition was the expectation that students would construct individual projects. Today's capstone is a "senior design project." Recognizing the need to increase students' materials and construction proficiency, the department

once again requires six credits of material processing, and has added a construction course to the curriculum. In another nod to the past, all students now take a robotics course. While such courses date back to the 1960s, they had always been electives. Today, students are not required to select technical electives, although they typically have between two and eight free credits; many students elect to take additional technology courses.

While the department continues to update the program, it remains based on systems and concepts (as opposed to unit skills), and is thus an evolution from the 1969 curriculum. ♦ draft / P. Foster / May 2009

	year					course numbers	
	2009	1995	1980	1970	1952	current	past
design / drafting	9	3	5	5	6	115, 121, 221	211
electronics	3	3	3	3	6	223	213
power (engines)		3	3	3	7		214, 314
print media		3	3	3	6		212
automation / robotics	3					417	
engineering mat's / princ.	6	3	2	2		150, 241	118
senior project	3					498	
material processing	6	3	9	9	12	215, 216	217
systems courses total	12	21	4	4			
<i>construction</i>	3					445	
<i>transportation</i>	3	3				330	
<i>energy</i>		3	2	2			114
<i>communication / info</i>	3	6	2	2		310	113
<i>manufacturing</i>		6					420, 450
<i>general</i>	3	3				110	
total specified lab courses	42	39	29	29	37		
required tech electives		6	15	11			
lab / methods hybrid	3				6	155	
total technical credits	45	45	44	40	43		
TE / IA methods	9	9	9	10	10	299, 399, 400	199, 4x8
total major credits	54	54	53	50	53		

The Technology and Engineering Education program at Central Connecticut State University offers programs leading to K-12 teacher certification in Connecticut, including programs for college graduates. For more information, visit www.teched.ccsu.edu, call 860-832-1850, or write James DeLaura, chair, Technology and Engineering Education, CCSU, New Britain, CT 06050.