

**Science and Mathematics Across the Curriculum, A Supplement
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By Brooke McLane-Higginson**

Core: In Core programs with major emphases in science and mathematics, the emphases seem to be on science, with far less mention of mathematics. Certainly, most scientific studies involve mathematics, but out of 15 Core programs with major emphases, only 4 specifically mentioned mathematics, though two additional programs incorporated computer science. One faculty mentioned working with “a mainly non-science group of students, but...global warming...helped to maintain their interest in environmental-based sciences.” Another commented that “the diversity of skill levels in these areas made it difficult to reach all students at the same time.” In Core programs with minor emphases, faculty replied more evenly that they covered both math and science. “Practical applications” and “concepts” had greater importance here than in the major emphasis category.

CTL: Though only one CTL-only program reported a major emphasis in science and math, this number can be misleading because 14 additional CTL programs that are listed under Core, EWS, or IA also had major emphases in science and math, as well as an additional 25 reporting minor emphases. The one CTL-only program with a major emphasis studied the Pythagoreans and other Presocratics all the way through modern science as the “central organizing theme of the program.” For CTL-only programs with minor emphases, History or Philosophy of Science was the most popular form of study. Other programs incorporated science of storms, book layout in InDesign, economics, demographics, neurophysiology, and “biology, evolutionary theory, and genetics as possible ‘causes’ of violence.”

EA: EA programs are also very under-represented in science and math for the same reason as CTL. An additional 15 EA programs listed under Core, EWS, or IA had major emphases, and another 22 EA programs reported minor emphases. The single EA-only program with a major emphasis studied cybernetics and its applications in many different fields. For EA-only programs with minor emphases in science and math, the most frequent uses were in budget writing and grant proposals, as well as 2-D and 3-D design. Programs also included statistics, physics, mechanics, music theory (ratios, probability, symbols), demographics, tables, graphs, and timelines. One program read about “artists who work specifically with remediation of environmental systems,” while another incorporated math by studying tempo of body and location of voice.

ES: Many ES programs responded that science ‘was the whole program,’ writing little more information. Though only 9 of 50 programs with major emphases in these fields specifically mentioned mathematics, I assume that most or all of the sciences mentioned involve math at least somewhat. A couple programs incorporated budgeting as well. One program specifically mentioned learning “how to read and write scientific papers and cite references correctly.”

EWS: EWS programs incorporated a wide range of sciences as well as mathematics. Computing and finance were most frequently mentioned, as well as statistics and the vague “science.” More specifically, students were studying botanical medicine, history of science, physics of light and motion, positive psychology, disease outbreaks, evolution, Euclidean and non-Euclidean geometries, chemistry, and nutrition. In programs with minor emphases, students studied healthcare, Renaissance science, MIDI, Islamic sciences, statistics, and economics.

IA: Most IA programs incorporated ecological or biological sciences, as well as statistics. Many of these programs did lab work in addition to readings, lectures, and various assignments. Two programs focused on forensics (from time-of-death to geometry of blood splatters), and one explored marine biology and connections between art and science. In IA programs with minor emphases in science and math, students studied statistics, economics, history of science, computer science and applications, scientific policy, and the effects of bombing.

SI: Ironically, SI programs were least specific in reporting how science and mathematics were incorporated into programs. There is evidence of traditional math (algebra, calculus, etc.), as well as many different sciences (astronomy, thermodynamics, quantum mechanics, chemistries). Computer sciences were mentioned a few times, and some faculty specified that science credits were upper-division.

SPBC: Finance/economics and navigation were the most popular uses of science and mathematics in SPBC programs reporting a major emphasis. Faculty also covered statistics and research methods, as well as traditional mathematics (algebra, geometry, etc.). SPBC programs with minor emphases studied quantitative data as it appeared in their readings, finance, “impact of the scientific revolution on modern political theory,” physics of boats, how the brain works when learning, and statistics. One faculty commented that “only about half the class was comfortable with numbers,” and another said that students used little more than “9th grade math.”