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Over the last three years the College of Engineering and Science at Louisiana Tech University has developed and fully implemented an integrated freshman and sophomore engineering curriculum. The curriculum consists of coordinated blocks of mathematics, engineering, chemistry, and physics courses that are designed to integrate and support content across the block. One of the primary goals of the program is to provide students with a richer science and mathematics experience that draws on the students' engineering interests while at the same time equipping them with the desired background for their engineering courses at the appropriate time in the curriculum. The mathematics portion of the curriculum consists of a six-course sequence that covers material from precalculus, calculus, differential equations, and statistics and uses a just-in-time approach for the precalculus, statistics and some of the differential equations material. This paper will 1) outline the design and content of the mathematics sequence; 2) illustrate how the mathematics content coordinates with and is supported by the companion courses in engineering and science; and 3) review some of the assessment results from the first three years of the program. (Received September 15, 2000)