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The liberal arts in science and engineering education: The case of MIT

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A liberal arts and science curriculum has been essential for the undergraduate education in most of the selective American comprehensive colleges and universities. In fact, observers from around the world regard the educational philosophy behind the liberal arts and science curriculum as a hallmark of a high quality American undergraduate education.

Much less well-known and often surprising to international observers is that MIT as one of the premier science and engineering universities has also a strong liberal arts and science curriculum. MIT undergraduate students spend about a quarter of their studies in subjects related to the humanities, arts, and social sciences. For almost another quarter, every student enrolls in courses that cover broad basics of mathematics, physics, chemistry, and biology. Finally, a communication requirement that spans across the entire curriculum helps students to become effective writers and speakers.

My presentation would have three parts. First, I would like to briefly present the actual mechanics of this curriculum. Secondly, I would discuss the question of why MIT insists on this structure of a liberal arts curriculum. Time is one of the most precious commodities in a four-year undergraduate course of studies. Yet while there are many pressures to include more new specialized knowledge into a science and engineering curriculum, there is a broad consensus at MIT about the value of its liberal arts and science approach in undergraduate education. In this context, I would mention interesting feed-back from MIT's alumni that support the current structure of the curriculum. Finally, I would like to relate the discussion around the liberal arts and science curriculum to MIT's recently published findings of the MIT Task Force "On the Future of MIT Education".