

The Dual Degree Engineering Program Xavier University of Louisiana

The Dual Degree Engineering (DDE) Program is a five-year program whereby students earn two bachelor's degrees – a science degree from Xavier and an engineering degree from an affiliated engineering school. During the first three years, Xavier students complete courses in the core curriculum, science, math, and engineering under the guidance of the DDE Program Director. Students then transfer to an affiliated engineering school to complete the last two years of upper division coursework in their engineering discipline. Upon successful completion of the engineering curriculum, they are awarded both the engineering degree from that school and the degree in their science discipline from Xavier.

The DDE Program has given hundreds of students the opportunity to earn an engineering degree along with their Xavier science degree. The students value the opportunity, as well as the preparation for and assistance in admission to engineering schools. Since the program was traditionally centered in the Department of Physics with about half of the majors participating, it undoubtedly contributed to Xavier's recognition by the American Institute of Physics as the largest producer of African American graduates in Physics (2004 to 2006). Our DDE students have chosen to complete their engineering degrees locally at Tulane University or the University of New Orleans, as well as at Georgia Institute of Technology, North Carolina A&T, Maryland and Michigan, and now Notre Dame. The vast majority of DDE students complete their engineering degree requirements at these schools in 2 – 3 years.

Since DDE students must be prepared to enter the engineering school as junior transfers, the DDE Program offers lower division engineering courses, guidance and mentoring, and research opportunities. The engineering courses, as well as the degree plans themselves, are coordinated with our partnering engineering schools to ensure the DDE students the students can complete the engineering degree in two years and have the foundations expected of all engineering students. In addition to standard engineering courses, we are following new trends of incorporating MATLAB and AutoCAD into the courses. All aspects of the program are reviewed periodically by the DDE Steering Committee, which is comprised of representatives of each participating department, a student member, and the Director and Associate Director. The DDE Director and Associate Director meet with all DDE majors to advise them about their academic progress, to guide their choice of engineering school and discipline, and to prepare them for the engineering school environment. With the depth and range of research taking place at Xavier, we identify those opportunities which have a clear relationship to engineering to guide our students into. In addition, we leverage our research network to place students into summer research opportunities at large research universities and government labs. Students participate in outreach activities in local schools and the community through the university, their student organizations, and the regional Louisiana Engineering Advancement Program which we administer.

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