This presentation will elaborate on the principles of Engineering Design Process (EDP) and its application in teaching vital undergraduate mathematics courses such as Calculus. While mathematics is the binding force behind the STEM fields, students fear it more than science, technology, and engineering; the other three components of the field. The abstract nature of mathematics and its classroom presentation involving lengthy procedures and application of rules and formulas seemingly far removed from real-life contexts appears to undermine its relevancy from a student’s perspective. Since the application of mathematics and science is the overarching theme of the discipline of engineering, EDP which engages students in hands-on systematic ways of exploring solutions to real-life problems can provide them a sense of fulfillment in taking these courses. The highly collaborative nature of EDP along with its challenge-based approach to problem-solving will better prepare students for a successful future in learning mathematics and the application of mathematics in other STEM disciplines. (Received August 03, 2019)