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The Montgomery College "Project Portal to Success in Engineering" addresses "the why?" component of reports detailing the attrition rate of minorities and women in engineering. It is based on the premise that strong skills in mathematics are necessary for success in engineering curricula. This talk begins with a brief description of the project's various components and an overview of the strategies employed to achieve its goals with a special emphasis on the six-week summer bridge program. In particular, we discuss highly effective strategies aimed at strengthening student's performance in algebra and pre-calculus, innovative ways such as the use of the TI-89 and MATLAB in understanding "What is Calculus About?", and other supplemental instruction such as academic coaching and undergraduate research activities. In addition, preliminary data and initial observations on the effectiveness of our model will be presented. (Received September 06, 2007)