The Center for Applied Mathematics and Science (CAMS) at Salisbury University has as its centerpiece a four credit undergraduate course: Directed Consulting. This "course" provides students with the opportunity to work on a real problem, not just a realistic problem, in a team setting similar to that in which professionals work. While providing this educational experience for STEM students, CAMS helps businesses, industries and educational agencies solve problems in strategic ways. The directed consulting course is a team of students with different backgrounds working under the direction of two faculty members. The team studies a particular problem, builds appropriate mathematical and statistical models and produces a report. In this paper we will discuss the operation of the course, including the selection of faculty leaders; the process of finding projects to work on; and funding, as well as the benefits to students and the faculty involved. The last two projects involved Salisbury University mathematics placement and developing an economic index to indicate the strength of the economy of the Eastern Shore of Maryland. (Received September 20, 2011)