In January 2004, the President set goals for the space program in the 21st century. This renewed sense of direction means that a whole new generation of scientists and engineers will be needed to support space-based science and technology. Declining enrollments in science, mathematics, and space related engineering programs are well documented in the United States. These enrollment reductions are also observed at Louisiana colleges and universities, which are starting to recover from last year’s hurricanes. Since 2003, physics students at the University of Louisiana at Lafayette (UL Lafayette) have participated in two balloon payload projects sponsored by the Louisiana Space Grant Consortium (LaSPACE). In 2004-2005, physics students at UL Lafayette attended an informal ballooning course to design and build a student-directed payload for launch at the NASA National Scientific Ballooning Facility in Palestine, Texas in May 2005. In 2006, students participated in the High Altitude Student Payload (HASP) program to measure cosmic ray intensities using traditional film and absorbers. This 10 kg payload flew from Fort Sumner, New Mexico in early September 2006. This presentation will discuss our participation in both balloon projects. Emphasis will be placed on highlighting the "hands-on" and step-by-step approach used to provide students with practical space related skills.

Keywords: 0810 Post-secondary education, 0825 Teaching methods, 7984 Space radiation environment