Student Program for Innovation in Science and Engineering (SPISE)

The Student Program for Innovation in Science and Engineering (SPISE) is an intensive four-week enrichment residential summer program for gifted Caribbean high-school students who are interested in studying and exploring careers in science and engineering. The inaugural 2012 SPISE represented the first milestone in the CSF’s mission to help diversify the economies of the Region by encouraging more students to pursue careers in science and engineering, and to consider becoming entrepreneurs. The program is modeled after the well-known and highly successful MITES program at the Massachusetts Institute of Technology (web.mit.edu/mites). The SPISE provides a learning environment in which understanding the concepts and fundamental principles in several disciplines is reinforced over and above rote learning. Further, critical thinking and analytical and logical problem-solving approaches are emphasized in order to find solutions to complex problems that may not have been encountered before. Team work is yet another essential component of the SPISE experience, as are applying efficient study habits and time-management skills. All students participate free of charge, due to generous donations from sponsors. Key important partners of the SPISE are the University of the West Indies Cave Hill Campus, and the CXC. It is anticipated that students who complete the SPISE will eventually attend some of the best science and engineering universities in the world, and become scientific, engineering and business leaders in academia and industry within the Caribbean.

2012 SPISE

The inaugural 2012 SPISE was held in August at the Barbados campus of the University of the West Indies. Ten students from six different countries (Barbados, Belize, Jamaica, St. Kitts and Nevis, St. Lucia, and Trinidad and Tobago) successfully completed the busy four-week schedule comprising classes in calculus, physics, biochemistry, Mandarin, humanities (one Caribbean concept), as well as laboratory project work in electronics and robotics. The sponsors, whose support was critical for the 2012 SPISE, were Scotiabank, Williams Industries (Barbados), Light and Power Holdings, St. Lucia Electricity Services Limited (LUCELEC), MIT Sea Grant Program, Neal & Massy Foundation, Central Bank of Barbados, Caribbean Development Bank, Belize Telemedia Limited, National Gas Company of Trinidad and Tobago Limited, BG Energy Holdings Limited, and Mr. Nicholas Braithwaite's PETNA Foundation. The University of the West Indies (Barbados Campus) generously donated the use of their facilities, making the program possible. On the final afternoon of the program, in front of a packed and captivated audience, the students gave presentations on their projects in humanities, electronics and robotics that included demonstrations with metronomes clicking, numbers flashing, amplifiers playing music, and underwater robots navigating obstacles in a water tank. Dr. Basil Springer, in his Caribbean Business Enterprise Trust (CBET) column, referred to that afternoon as a ‘magnificent, indeed awesome experience’. One of the press releases on the 2012 SPISE is reproduced below. For other press releases including photos of the students and their project demonstrations, please see the links at http://caribbeanscience.org.

2013 SPISE

Approximately 20 students will participate free of charge, with support from sponsors. SPISE 2013 will run from July 20 to August 17. Applicants must be at least 16 years of age but less than 18 years of age on July 1, 2013, and have completed CXC exams or equivalent in math and science subjects. Students from low-income households are encouraged to apply. Student, Teaching Assistant and Instructor application forms are posted on the CSF website (http://caribbeanscience.org) and are due on April 22, 2013. For students, letters of recommendation, transcripts and essays are required. Students living outside of Barbados must prove that they have valid passports at the time their application is submitted.

For information about sponsoring a student, please contact Prof. Cardinal Warde directly (warde.csf@gmail.com or 1-617-699-1281). The cost of sponsorship is approximately US$6,000 per student, and students are branded with the name of their sponsors.