VIRGINIA SPACE GRANT CONSORTIUM

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Member Institutions:

College of William & Mary

Hampton University

Old Dominion University

University of Virginia

Virginia Polytechnic Institute and State University

Mathematics and Science Center

Science Museum of Virginia

Virginia Air and Space Center

NASA Langley Research Center

NASA Goddard Space Flight Center's Wallops Flight Facility

State Council of Higher Education for Virginia

Virginia Community College System

Virginia Department of Education

January 13, 2011

Reagan Mullins, Principal
Rye Cove High School
164 Eagle Nest Lane
Duffield, VA 24244

Dear Mr. Mullins:

During the 2010-2011 school year, the following student(s) from your school will participate in the Virginia Aerospace Science and Technology Scholars (VASTS) program (www.vasts.spacegrant.org).

Steven Woodburn

At the end of the program, the Scholar has the option of requesting high school credit for his/her work. It is our understanding that many school districts must have notice of this potential request prior to the start of the course. We ask that you help the student(s) by laying the groundwork. Upon completion of the course, we will send you documentation of their final grade.

VASTS is a one-semester, interactive, NASA exploration-themed online course based on the Texas Aerospace Scholars curriculum developed by NASA Johnson Space Center (http://aerospacescholars.jsc.nasa.gov/HAS/Modules/). The program application and selection processes are highly competitive and rigorous. The Scholars are immersed in real-world aerospace experiences that build STEM-content knowledge and skills in addition to exposing them to the range of available aerospace careers through interactions with scientists, engineers, and technologists at Langley Research Center in Hampton.
Each student will engage in 150 hours of online coursework *(not course credit hours).*

The VASTS program exemplifies the tenets of project-based learning. Scholars are presented with the problem of collaboratively constructing a human mission to Mars architecture design. The mission design project provides the Scholars the purpose for research and content knowledge acquisition.

Through the distance-learning online course, Scholars begin to learn the content that supports the individual and collaborative decisions that are made in the mission design project. Scholars have a context and an understanding of what and why they are learning specific concepts, theories, and information. The online course consists of ten problem-based learning modules where math and physics-based equations are solved and essays regarding space exploration and spacecraft design are written and submitted to an assigned Master Teacher for feedback and assessment.

The final online project assigns a student to research and report on particular enabling technologies that support mission-specific systems in long-duration space and surface exploration. These reports are posted online within the course for other Scholars to read. Acquiring knowledge and communicating complex issues and technologies to others is the model by which information is disseminated in academic and professional settings. The Scholars gain real-world experiences by learning these valuable writing and communicating skills with the VASTS course. The Scholars have online advisory support from NASA Mentors and Master Teachers who provide continuous feedback and assessment for the Scholars during and after the writing process. Discussion forums are created and dedicated to each group's discussion of the final projects. Scholars, Master Teachers, and NASA Mentors discuss the technologies and concepts defined by the projects.

We hope that you can provide the VASTS Scholar(s) with course credit for his/her participation in this prestigious and time-intensive NASA and Virginia Space Grant Consortium program. If you have questions, please do not hesitate to contact us.

We look forward to having more Scholars from your school participate in VASTS in the future.

Please find enclosed the syllabus for the online course.

Sincerely yours,

Mary Sandy

Mary Sandy
Director

Amber Agee-DeHart

Amber Agee-DeHart
Program Manager

Enclosure

cc: Jane Carter, Guidance Counselor