



2010 NASA Academy

Goddard Space Flight Center

Program Description

"A decision to go to the NASA Academy is a decision to push your personal and professional envelopes to their limits. If you are ready to give completely to research, discovery, leadership, and group efforts then the Academy will help you to maximize your potential in your corner of the American Space Effort."

David Vaughan - Academy '95

I n t r o d u c t i o n

NASA's Charter, written in the 1958 Space Act, gives it the main role of using and exploring space for the betterment of humankind. Since then, the U.S. Congress and the President have supported NASA as its programs have evolved. President John F. Kennedy's vision of putting a man on the moon within the decade of the 1960's included much more than the Apollo lunar landing spectacular of newspaper fame. After Apollo's success, NASA has constantly sought to redefine its goals and fine-tune its schedule every year seeking a budget to match its imagination. The success of the Space Program has resulted from the interaction of government, academia, and the private sector, each playing a critical and different role in the U.S. civilian program. Responsibilities overlap, leaders migrate from one sector to another, and interdependence changes with each new administration. NASA Academy is a unique summer institute of higher learning whose goal is to help guide potential future leaders of the Space Program by giving them a glimpse of how this interactive system works.

"Whenever I am asked to relate my Academy experiences, I find it difficult to express in words what was for me a uniquely indescribable adventure. But if words are required, here are a few...intense, rewarding, exhausting, inspiring and unforgettable."

Jake Lopata - Academy '95

G o d d a r d S p a c e F l i g h t C e n t e r

The Goddard Space Flight Center (GSFC) is the scientific flagship of the Space Agency. About one half of all of NASA's civil service scientists work at Goddard. Goddard has about 3000 government employees plus approximately 7000 contractors, guests, students, post-doctorates, researchers, and visitors. Goddard has eight directorates: one in science, three in engineering, one in flight projects, one in management operations, one in sub-orbital and special orbital projects, and one for the office

of the Director. The work of GSFC, as its name indicates, is "space flight." We believe that missions to space will bring new data that will allow us and our partners in academia and industry to better understand our world and our universe. Goddard's management makes this its credo. Goddard's success is not measured in launches or hardware or spacecraft; it is measured in discoveries, ideas and understanding.

It is this spirit that has led to the foundation of the NASA Academy. Space flight is not accomplished by 'rocket scientists' alone; it is done by scientific vision, innovative engineering, rigorous quality control, and involves flight managers, data and operations experts, and a whole team of lawyers, comptrollers, procurement people, technicians, programmers, and a workforce... all marching to the same tune. Goddard successes -- COBE, GRO, UARS, LANDSAT, TRMM, MAP, EOS, FIRST and SECOND HUBBLE SERVICING MISSION, HETE II, GOES-- and the list goes on to over a hundred missions, have changed the school textbooks and opened up whole new fields of science. People who visit Goddard marvel at the opportunity to experience a panorama of activities from inspiration to construction to management and interpretation of the whole science-engineering-operations effort. Clever students, working with the proper guidance during the summer months, will get a real taste of this.

"The NASA Academy is a dream-come-true experience, but only for those people seriously interested in the Space Program"

Warren Brown - Academy '93

T h e A c a d e m y

One goal of the Academy is to provide insight into all of the elements that make the NASA missions possible, while at the same time assigning the student participants to some of our best researcher groups where they can contribute to ongoing missions. The student participants are selected through a combination of mentor and agency sponsor endorsements, scoring panels, interviews and selection by a NASA panel. About 25% of the working time and most of the social time of the Research Associates (RAs) will be spent in "group" or "team" oriented sessions. This time will be devoted to exchange of ideas, on forays into the highest level of decision making, prioritizing, planning, and executing space

missions. This is done by interviews with leaders and motivators of the Space Program. Besides the local Goddard 'experts', meetings are arranged with legislators, business company presidents, international partners, scientists, engineers and the other people who champion our cause. Additionally, RAs will have the opportunity to develop their leadership and team skills through an assigned Group Project. The remaining 75% of the working time will be spent in the laboratories of the Principal Investigators researching the technical project.

"The Academy is the definition of a full-time experience - If this was the summer you planned on catching up on your reading or exercising 4 hours a day - forget it! The three most important qualities you need to have are a PASSION for space and the future, a COMMITMENT to the Academy (you must "give" yourself to the Academy), and enough CONFIDENCE in yourself to believe you can change the world. Over only ten weeks you will garner more useful, real-world knowledge than you did all through college, meet an incredible number of brilliant and exciting people, and supply yourself with more tools than you could ever use to achieve your highest goals!"

Eric Anderson - Academy '95

Activities - June 1 to August 6

The Academy beginning and end dates were selected to give most students a breather before returning to school. We know this is a compromise, as school schedules vary. It is important that all students begin together and end together. The success of the Academy depends not on us as much as the student participants. NASA Academy does not accept people who are not able to attend this entire period.

One of the cornerstones of the Academy is to assure that the students interact as a "team", and to spark their individual leadership qualities.

Field trips are included in the program, such as to the Johnson Space Center (JSC), the Langley Research Center (LeRC), the Wallops Flight Facility, Orbital Sciences, or the U.S. Naval Academy. Other weekend trips will be planned by the RAs upon arrival. Car owners are encouraged to bring their cars to afford maximum flexibility to the group.

Each of the ten weeks will be a unique group experience, but at the same time the students will be working on research projects with Investigators in Goddard laboratories or on our flight projects. Every morning after breakfast at Goddard the work starts at 8 am, lunch is at Goddard, and dinner is generally back at the Academy house.

"Ever desire to pull the face off your wristwatch or remove the cover from your radio to discover how these devices operate? NASA Academy does this to the space program, and just like seeing the springs of the watch or the circuit boards in the radio, you'll find yourself with familiar and unfamiliar objects that present to you the challenge of understanding how everything works together."

Laura Sachi - Academy '95

The Academy Group Project

Part of the Academy experience includes a special Group Project designed to cultivate the participant's teamwork and leadership skills. Although topics will be pre-selected and will likely involve some form of collaboration with a Goddard educational partner, the academy RAs will decide what, when and how the assigned project will be executed.

The Academy Experience

This summer up to twenty students interested in space or earth science or space engineering coming from all over the world will be selected for the 10-week session to share a unique experience resulting from their own ingenuity and free spirit.

Teaching and learning are not the same. Teaching is the orthodoxy of our colleges and universities; learning is the "ah-ha!" process of finding out and understanding. That is our objective: to foster curiosity, to spirit endeavor, and to inspire leadership.

All of these elements make NASA Academy a unique experience. All that is needed is a group of unique individuals who can make these elements a meaningful education.

"The NASA Academy is a once-in-a-lifetime experience. In a ten-week period one learns more about NASA, government and industry relations with NASA, people, and oneself. It is an intense time of learning, experiencing, researching, meeting new people, making life-long friends, and basically having a great time. Not for those who enjoy relaxing, only for those with an intense desire to lead, and to learn about leading."

Todd Crowley - Academy '94

The NASA Academy is not a typical summer internship. Not only do the RAs work together, but they also live together. If you want to learn more about the "Academy" experience, some alumni have volunteered their contact information, and would be happy to answer any questions you may have about the Academy. NOTE: Contacting one of these people will in no way affect your selection.

CONTACTS:

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*"NASA Academy was a phenomenal experience that transcended the typical summer internship experience. The Academy provided more than just an opportunity to work on an innovative project with leaders in the industry. Through group projects, seminars, and field trips, it provided me with a firm foundation to succeed as an engineer in this industry."
Tracee Walker - Academy '98*