

Alabama Space Grant Consortium
Lead Institution: The University of Alabama in Huntsville
Director: Dr. John C. Gregory
Telephone Number: (256) 824-6800
URL: <http://www.uah.edu/ASGC/>

PROGRAM DESCRIPTION

The National Space Grant College and Fellowship Program consists of 52 state-based, university-led Space Grant Consortia in each of the 50 states plus the District of Columbia and the Commonwealth of Puerto Rico. Annually, each consortium receives funds to develop and implement student fellowships and scholarships programs; interdisciplinary space-related research infrastructure, education, and public service programs; and cooperative initiatives with industry, research laboratories, and state, local, and other governments. Space Grant operates at the intersection of NASA's interest as implemented by alignment with the Mission Directorates and the state's interests. Although it is primarily a higher education program, Space Grant programs encompass the entire length of the education pipeline, including elementary/secondary and informal education. The Alabama Space Grant Consortium is a Designated Consortium funded at a level of **\$785,000** for fiscal year 2009.

PROGRAM GOALS

The Strategic Plan and Goals of the ASGC contains the following Vision and Mission Statements. Our specific goals are aligned with the ASGC strategic plan, with NASA's Education Enterprise Strategy and Human Capital Management Plans, and with the recommendation of the President's Commission on Implementation of U.S. Space Exploration.

Our Mission is: to inspire, enable and educate a diverse group of Alabama students to take up careers in space science, aerospace technology and allied fields; to play our part in assuring U.S. leadership in space exploration and aerospace technology in the future; to inspire the next generation of space explorers; to bring increased realization of the value of space science and technology to the people of Alabama; to insure that our message and our programs reach all constituencies in the population of Alabama, especially those traditionally under-represented in the science and engineering professions.

Our Vision is: an increased level of appreciation, participation and leadership by all the people of Alabama in the national and international space exploration and aerospace engineering enterprises. The ASGC program has, over the years, selected components in each of the NASA Space Grant national emphasis areas that also fit well with Alabama interests in one, and usually both, of the following senses: 1) there is a clear existing need and interest shown by an Alabama faculty member, a teacher, a group of students, school system, university, industry, museum, etc.; and 2) there is evident willingness of an Alabama stakeholder to provide matching resources to achieve common objectives with

NASA (the ASGC program shows match, or co-funding, mostly from non-federal sources of a ratio of 1.3:1 for every NASA dollar).

Outcome 1 (Employ and Educate) Consortium Fellowship/Scholarship, Research Infrastructure, and Higher Education Program Goals and SMART Objectives.

Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goals, through a portfolio of investments.

ASGC Program Goals: Fellowship & Scholarship

- 1) Support and maintain fellowship and scholarship program with high-caliber students;
- 2) Recruit fellows and scholars at all 7 member PhD-granting institutions;
- 3) Each fellowship will be matched by another of equal value using local funds; and
- 4) Actively recruit and support students in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Fellowship & Scholarship

- Objective 1: All 7 member PhD-granting institutions will have recruited, at minimum, of 3 fellows/scholars per university in FY09.
- Objective 2: In FY09, each affiliate will continue to match each fellowship it receives with a second Fellowship to be administered by ASGC at the same value and will maintain the \$24,000 stipend level to remain competitive with other Federal agencies. (This brings an additional \$144K of non-Federal funds into the ASGC Fellowship program).
- Objective 3: All recruited fellow and scholar awardees in FY09 will have a diversity level of 25% minority and 40% female participants in these programs.

ASGC Program Goals: Research Infrastructure Development

- 1) Support a significant number of motivated students and mentors encompassing a wide range of experiences in internships at NASA centers and collaborating industry;
- 2) Recruit a diverse cadre of students to work on mentored research projects at our established REU Programs at Alabama universities;
- 3) Ensure all REU projects funded with NASA funds shall be aerospace science and technology or STEM focused;
- 4) Support underrepresented faculty or faculty from our MSI members at research opportunities at NASA field centers; and
- 5) Actively recruit and support students and faculty in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Research Infrastructure Development

- Objective 1: A diverse group of 8 students from Alabama Universities will be placed at interns at NASA centers and collaborating industry in FY09.
- Objective 2: A diverse group of 24 students will be recruited to work on mentored research projects at 3-4 Alabama universities via our Research Experience for Undergraduates Programs in FY09.
- Objective 3: 1 underrepresented faculty or 1 faculty from our MSI members will be placed at a research opportunity at a NASA field center in FY09.
- Objective 4: All recruited research infrastructure participants in FY09 will have a

diversity level of 25% minority and 40% female participants in these programs.

ASGC Program Goals: Higher Education

- 1) Support special courses in Space Hardware Building and Project Management;
- 2) Maintain and grow Student Building Space Hardware Programs throughout the State of Alabama; and
- 3) Actively recruit and support students and faculty in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Higher Education

- Objective 1: 3 special courses in Space Hardware Building and Project-Management will be supported at 3 of Alabama universities in FY09.
- Objective 2: Maintain 15 student building space hardware programs at 6 universities in FY09, including 4 programs at 2 HBCU's.
- Objective 3: Initiate 1 new student building space hardware program at 1 university or 1 community college in FY09.
- Objective 3: All recruited higher education participants in FY09 will have a diversity level of 25% minority and 40% female participants in these programs.

Outcome 2 (Educate and Engage): Consortium Pre-college Programs Goals and SMART Objectives.

Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers and faculty.

ASGC Program Goals: Pre-college Education

- 1) Support a select set of projects and events that emphasize the development of K-12 teachers, particularly in pre-service and in-service program areas, which encourage young students to prepare for STEM careers;
- 2) Leverage funds with larger contributions from other sources;
- 3) Focus on in-service and/or pre-service teacher training that results in deeper content understanding and/or competence and confidence in teaching STEM disciplines;
- 4) Support NASA Education programs;
- 5) Evaluate programs to insure continuous improvement; and
- 6) Direct programs to underrepresented and underserved populations.

SMART Objectives: Pre-college Education

- Objective 1: 3 in-service and/or pre-service teacher educators will attend teacher educator workshops in FY09.
- Objective 2: Undefined. Targets of opportunity that meet the program goals will be identified and pursued.

Outcome 3 (Engage and Inspire): Consortium General Public and External Relations Program Goals and SMART Objectives.

Build strategic partnerships and linkages with STEM formal and informal education provides that promote STEM literacy and awareness of NASA's mission.

ASGC Program Goals: General Public and External Relations

- 1). Actively engage members of the public from traditionally underrepresented groups;
- 2) Bridge the gap between Land and Earth Grant research and geospatial technology and societal needs in Alabama;
- 3) Leverage funding to extend the reach of SG beyond direct investment;
- 4) Support science education needs in underserved schools;
- 5) Engage students in informal education initiatives; and
- 6) Track impacts and evaluate programs success via quantitative and qualitative methods to insure continuous process improvement.

SMART Objectives: General Public and External Relations

- Objective 1: The activities of 1 Space Grant Fellow, Dr. J-M Wersinger, will be supported to help NASA and the Department of Agriculture bridge the gap between Land and Earth Grant research.
- Objective 2: 1 training workshop on satellite remote sensing and Geographic Information Systems (GIS) technology will be offered in FY09 by 1 Alabama University.
- Objective 3: In FY9, 2 state Regional Science Olympiad and Science Fairs that are supported by the ASGC and held annually at the lead-institution will have over 2,000 participants.

PROGRAM/PROJECT BENEFIT TO OUTCOME (1,2, OR 3)

The ASGC can demonstrate an overview of how we are contributing to the 3 outcomes. All comments below come from students whom were supported by the ASGC during FY09.

NASA Education Outcome 1:

Participation in the Space Grant Program provided me the opportunity to see how the various fields of science and health can be used to explore life in another realm. I think it is very important that we try to educate ourselves about the universe that surrounds us. (Britney Willis - on 02/05/10, 2009 Space Grant Scholarship, Auburn University).

Provided opportunities to participate in extramural activities involving sharing research with students. Provided funding to present sponsored research in conferences. Provided funding to research with NASA personnel. The impact of the NASA Space Fellowship has impacted my educational life by allowing me to focus on my dissertation. The training and experience I received in my academic life have improved my personal life by making me a more competent, informed, and well-rounded individual. (David Branscomb - on 04/16/10, 2008 Space Grant Fellowship, 2009 Space Grant Fellowship, Auburn University - Research Assistant).

The Space Grant program has significantly opened my eyes to some opportunities that I was ignorant of. I have been fortunate to work with undergraduate students and help expose them to advanced materials research, from the idea phase to the development and testing phase. Overall, I'm really grateful to have collaborated with researchers at other Universities and research institutions (NASA, AFRL, and ARL). (Keith Green,

2007 ASGC Fellowship Program, 2008 Space Grant Fellowship, 2009 Space Grant Fellowship, The University of Alabama in Birmingham).

It allowed for me to see the various opportunities available in the STEM field. With this knowledge, I have more of an initiative to complete school and become part of the growing STEM fields in NASA. (Christopher Lesley - on 01/05/10, 2009 NASA/Robotics Academy, Alabama A&M University).

This scholarship has help me, make valuable contacts throughout the engineering field, I have become closer with my Dean and other campus individuals that are related to this scholarship. I have also become more aware of the opportunities offered by NASA, and I have a better understanding of what NASA does for the science field. (Breon Williams - on 01/03/10, 2009 Space Grant Scholarship, Alabama A&M University, University of Illinois Urbana - FOD and Avian Radar Researcher).

The scholarship money helped significantly with educational expenses and relieved some of the financial stress. The extra money allowed me to concentrate on school and research work instead of having to find a part time job. The three internships gave me the opportunity to do hands-on NASA research and make valuable contacts for my future career. I am currently assisting the HypsIRI team at JPL to help prepare them for the mission's concept review. (Danielle Nuding, 2008 Space Grant Scholarship, 2009 Space Grant Scholarship, 2009 NASA/SG JPL, The University of Alabama in Huntsville - Student Specialist).

NASA Education Outcome 2:

This has been the best professional development I have attended in my thirteen years of teaching. Thank you so much for making it possible for me to attend the LiftOff Summer Institute at JSC. (Stefanie D. Jenkins – on 07/20/10, Shades Cahaba Elementary, K-5 Teacher, Hands-on, Inquiry-based Math, Science, and Technology).

NASA Education Outcome 3:

My experience with the Alabama Science & Engineering Fair has been priceless. I was given the opportunity to roll up my sleeves and practice science. It was such a unique opportunity for me to experience the entire science process. I was able to benefit from this experience because it will help me take the next step in my educational career. (Arina Ghosh – on 04/03/10, High School Student, “*The Effect of Heavy Metals on Porphyrin Ring Compounds part 2: Hg and Pb Uptake at the Base of the Food Chain Near Toxic Waste Disposal Sites*”. Alabama School of Fine Arts, Jefferson County, Birmingham, AL).

PROGRAM ACCOMPLISHMENTS

NASA Education Outcome 1:

ASGC Program Goals: Fellowship & Scholarship

- 1) Support and maintain fellowship and scholarship program with high-caliber students;
- 2) Recruit fellows and scholars at all 7 member PhD-granting institutions;
- 3) Each fellowship will be matched by another of equal value using local funds; and

4) Actively recruit and support students in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Fellowship & Scholarship Accomplishments

- Objective 1: All 7 member PhD-granting institutions (AAMU, 6 students, AU, 4 students, UA, 13 students, UAB, 3 students, UAH, 11 students, USA, 6 students & TU, 5 students) were able to recruit and award fellows/scholars in FY09. A total of 48 fellowships and scholarships were awarded and directly funded in FY09 (11 Graduate Fellows, 35 Undergraduate Scholars and 2 Teacher Educator Scholars). The total amount of NASA funds awarded to Fellows and Scholars by ASGC in FY09 was \$179K for a total worth of funds, after matching, of \$323K.
- Objective 2: Each affiliate was able to continue to match each fellowship it received in FY09 with a second Fellowship at the same value (\$24K). The stipend level was able to remain at \$24K, which brought an additional \$144K of non-Federal funds into the ASGC Fellowship program.
- Objective 3: The ASGC exceeded its recruiting objectives for fellow and scholar awardees in FY09. We had projected a diversity goal of 25% underrepresented minority (actual was 45.8%) and 40% female participants (actual was 44%) in these programs. We had 77% undergraduate and 23% graduate awardees.
 - 96 total students were “significantly supported” from FY09 funds (48 fellowship/scholarship and 48 higher education/research infrastructure). 32 students took their next step in FY09 (SG participation supported from FY06-09 funds). 8 graduated and are pursuing advanced STEM degrees, 1 accepted a STEM position at a NASA contractor, 18 accepted STEM positions in industry, 1 accepted a position at NASA and 4 went into non-STEM fields.

ASGC Program Goals: Research Infrastructure Development

- 1) Support a significant number of motivated students and mentors encompassing a wide range of experiences in internships at NASA centers and collaborating industry;
- 2) Recruit a diverse cadre of students to work on mentored research projects at our established REU Programs at Alabama universities;
- 3) Ensure all REU projects funded with NASA funds shall be aerospace science and technology or STEM focused;
- 4) Support underrepresented faculty or faculty from our MSI members at research opportunities at NASA field centers; and
- 5) Actively recruit and support students and faculty in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Research Infrastructure Development Accomplishments

- Objective 1: ASGC surpassed its objective of directly funding 8 student interns in FY09 by 10. A diverse group of 18 students from Alabama Universities were placed in research internships at NASA centers (Ames, GSFC, JPL & MSFC) and collaborating industrial partners (Orion Propulsion, Inc. – purchased by Dynetics, Inc. in December, 2009) in FY09 that were directly funded by the ASGC.
- Objective 2: ASGC surpassed its objective of directly funding 24 REU students in FY09 by 32. A diverse group of 32 direct funded students were recruited to work on

mentored research projects at 3 Alabama universities (UAB, UAH & USA) via our Research Experience for Undergraduates Programs in FY09. We directly funded 50 total students in Research Infrastructure overall with 44% female participants, 56% male participants. We had 94% undergraduate and 6% graduate participants.

- Objective 3: Although we assisted MSFC in running their Summer Faculty Fellowship Program in FY09, we were not able to direct support any faculty members at a NASA field center. Our objective was to support 1 underrepresented faculty or 1 faculty from our MSI members, but we did not accomplish this in FY09.
- Objective 4: We directly funded 22% underrepresented minorities under Research Infrastructure in FY09. We fell short by our objective of 25% by 3%). We did accomplish our objective of funding 44% female participants, which is an increase of 4%. Neither of these variations is statistically significant.

ASGC Program Goals: Higher Education

- 1) Support special courses in Space Hardware Building and Project Management;
- 2) Maintain and grow Student Building Space Hardware Programs throughout the State of Alabama; and
- 3) Actively recruit and support students and faculty in STEM fields from traditionally underrepresented groups at a rate consistent with NCES for Alabama.

SMART Objectives: Higher Education Accomplishments

- Objective 1: Injection of new courses into the undergraduate curriculum is extremely difficult at U.S. universities. We have done this at 3 universities in the past and it is a testament to the excellence of our faculty instructors. In FY09, we reached our objective and supported 3 (2 revised and 1 new) special courses in Space Hardware Building and Project Management (1 of these courses is newly developed by a minority, female faculty at UAH, Dr. Christina Carmen) at 2 of our Alabama universities (AU and UAH).
 - AU – PHYS 3500: Dr. J-M Wersinger, “Development of Learning Modules in Project Management and Systems Engineering and Physics of the World Around Us”,
 - UAH – MAE 490: Dr. Christina Carmen, “Collaboration between Americans in Orbit and MAE 490 Introduction to Engineering Design”,
 - UAH – MAE 493/593: Dr. Marlow D. Moser, “Propulsion Engineering & Rocket Design”.
- Objective 2: ASGC was able to maintain its objective of funding 15 student building space hardware programs (Moonbuggy, Lunar Regolith/Lunabotics, BalloonSat, CubeSat, Microgravity and USLI) at 5 universities (AAMU, AU, UAH, USA and TU), including 4 programs at 2 HBCU’s (Moonbuggy, BalloonSat and USLI at AAMU, and USLI at TU).
- Objective 3: ASGC initiated 1 new student building space hardware program (USLI) at 1 university (USA) in FY09. An effort was made to initiate 1 new program at a community college (Calhoun Community College) in FY09, but their competition proposal was rejected and they do not have a great deal of faculty support at the CC level. We did contact Calhoun Community College about the NASA Community College Aerospace Scholars Program and as a result, 4 Calhoun Community College

students (4 male/1 female) out of 76 students throughout the U.S. and Puerto Rico were selected to visit JSC to design space rovers on May 20-22, 2001.

- Objective 3: **Directly funded higher education participants in FY09.** We reached our objectives of a diversity level of 25% (actual 66.6%) underrepresented minority and 40% (actual 44%) female participants in these programs. All directly funded higher education participants were undergraduates in FY09. ASGC had a total of 222 higher education direct student participants FY09. 32% of these participants were female, 68% were male, and 30% of them were underrepresented minority students.

NASA Education Outcome 2:

ASGC Program Goals: Pre-college Education

- 1) Support a select set of projects and events that emphasize the development of K-12 teachers, particularly in pre-service and in-service program areas which encourage young students to prepare for STEM careers;
- 2) Leverage funds with larger contributions from other sources;
- 3) Focus on in-service and/or pre-service teacher training that results in deeper content understanding and/or competence and confidence in teaching STEM disciplines;
- 4) Support NASA Education programs;
- 5) Evaluate programs to insure continuous improvement; and
- 6) Direct programs to underrepresented and underserved populations.

SMART Objectives: Pre-college Education Accomplishments

- Objective 1: In FY09, we supported 2 in-service and/or pre-service teacher educators by having them attend teacher educator workshops. One of these workshops was a 1-week long experience for 1 female, underrepresented minority educator, to attend the Texas Space Grant's LiftOff Summer Institute: Designing a Space Mission at JSC. Our objective was to support 3, but we only found opportunities to support 2 in FY09. We will search for more opportunities to fund more teacher educators in FY10.
- Objective 2: ASGC supported 1 new, 1-week summer program in FY09 which targets High School Students through an outreach program involving Bioengineering and Chemical Engineering. University of South Alabama (USA) provided opportunities for students to interact with scientists and engineers at USA with intentions of getting these students into the STEM pipeline and go onto pursue degrees in STEM fields once they graduate H.S.

NASA Education Outcome 3:

ASGC Program Goals: General Public and External Relations

- 1). Actively engage members of the public from traditionally underrepresented groups;
- 2) Bridge the gap between Land and Earth Grant research and geospatial technology and societal needs in Alabama;
- 3) Leverage funding to extend the reach of SG beyond direct investment;
- 4) Support science education needs in underserved schools;
- 5) Engage students in informal education initiatives; and
- 6) Track impacts and evaluate programs success via quantitative and qualitative methods to insure continuous process improvement.

SMART Objectives: General Public and External Relations Accomplishments

- Objective 1: ASGC was able to support the activities of 1 Space Grant Fellow, Dr. J-M Wersinger, in FY09. He was able to assist NASA during the summer of FY09 at a detail at NASA HQ and he is instrumental in assisting the Department of Agriculture bridge the gap between Land and Earth Grant research since he is centrally located at Auburn University which is a hub for agricultural studies and The Southeastern Remote Sensing Applications Consortium (SERSAC) which is also located at AU.
- Objective 2: ASGC supported 1 training workshop on satellite remote sensing and Geographic Information Systems (GIS) technology in FY09. The workshop was targeted at professionals in community planning, engineering, construction, public health, emergency management, real estate and land management. It was hosted by The University of Alabama at Birmingham on May 11-13, 2010 by the UAB Laboratory for Global Health Observation (LGHO).
- Objective 3: In FY9, ASGC supported 3 State Regional Science Olympiad and Science Fairs that are held annually at the lead-institution, UAH, and these events hosted over 2,000 indirect participants and are venues to attract students in informal education initiatives and allow us to leverage our funding with co-sponsors. Members of the public from the entire State of Alabama are present at these events.

PROGRAM CONTRIBUTIONS TO PART MEASURES

- **Longitudinal Tracking:**
Total awards = 96; Fellowship/Scholarship = 48, Higher Education/Research Infrastructure = 48; 32 of the total awards represent underrepresented minority funding. The number of program student participants employed by NASA, aerospace contractors, universities, and other educational institutions is 20. The number of undergraduate students who moved on to advanced education in NASA-related disciplines is 8. The number of under-represented and under-served students participating is 32.

During the FY09 program year, 8 students graduated and are pursuing advanced STEM degrees, 1 student accepted a STEM position as a NASA contractor, 18 students accepted STEM positions in industry, 1 student accepted a position at NASA and 4 students went into non-STEM fields.

- **Course Development:** ASGC supported 1 new and 2 revised courses targeted at the STEM skills needed by NASA that were developed with NASA support. These courses are in Space Hardware Building and Project Management (1 of these courses is newly developed by a minority, female faculty at UAH, Dr. Christina Carmen) at 2 of our Alabama universities (AU and UAH). The courses are:
 - AU – PHYS 3500: Dr. J-M Wersinger, “Development of Learning Modules in Project Management and Systems Engineering and Physics of the World Around Us”,
 - UAH – MAE 490: Dr. Christina Carmen, “Collaboration between Americans in Orbit and MAE 490 Introduction to Engineering Design”,

- UAH – MAE 493/593: Dr. Marlow D. Moser, “Propulsion Engineering & Rocket Design”.
- **Matching Funds:** Ratio of funds leveraged by NASA funding support is 1.3:1.
- **Minority-Serving Institutions:** ASGC supported 2 MSI’s in FY09, which are both HBCU’s (AAMU and TU). The total number of **directly funded** student awards to MSI’s was 23 (11 Fellowship/Scholarship and 12 Higher Education/Research Infrastructure) out of 107 total awards (22%). ASGC supported 100 underrepresented minority students overall out of 320 students (31%) at all 7 consortia universities. Of the 32 underrepresented minority students that were “significantly supported” and therefore longitudinally tracked, 5 of the Fellowship/Scholarship students have accepted STEM (non-Aero) positions, 1 student has graduated and is pursuing an advanced STEM degree, and 1 student has taken their next step in a non-STEM position. Under Higher Education/Research Infrastructure, no underrepresented minority students have gone on to accept STEM positions since they are still enrolled in their current degree program.

IMPROVEMENTS MADE IN THE PAST YEAR

In FY09, ASGC made improvements that demonstrate significant changes within the Consortium. We adjusted our consortium management component to account for time spent on actual program execution. This will be reflected in our FY10 figures. We have upgraded our Fellowship Program (increased our stipend level from \$24K to \$37K) to stay competitive with NASA, DOD, and NSF’s Fellowship Programs. These new Fellowship awardees with their new stipend levels will be funded during FY10. We have also upgraded our Fellowship/Scholarship application system by moving it to an all on-line system in FY09 and we have moved to a new longitudinal tracking system in FY09 to allow for a more effective and efficient way to track students. At AAMU, we added a new BalloonSat program with a new mentor and we did that by supplying them a UAH mentor to assist the AAMU mentor. This allowed us to initiate a successful BalloonSat program at an HBCU. We also initiated a new Moonbuggy program at TU, but the team did not come together in time to compete. We are hoping they will be able to compete in FY10. TU also was able to fly its first NASA USLI competition rocket in FY09. We attempted to bring in Calhoun Community College under USLI, but their proposal was not accepted by NASA and we have found they have a lack of faculty mentorship. We plan more interaction with Community Colleges in FY10.

PROGRAM PARTNERS AND ROLE OF PARTNERS IN PROJECT EXECUTION

The ASGC collaborates with many institutions across the state in the execution of its programs. We have a closely-knit management team consisting of the campus directors of all the 7 Research Universities across the state (2 of which are HBCU's) and a couple of others including the University Affairs Officer at MSFC. We call the home institutions of the Management Council "**Members**" of ASGC and all other partners we call "**Affiliates**". The affiliates tend to come and go, that is they may not participate each year; they may come in for a special opportunity. The provision of these affiliate

resources, while very real and valuable, does not mean that these partners have any inclination to participate in the management of the overall program, and in fact most simply do not have the time to spend finding out about all the other programs in ASGC. **All our “members”** do, however, actively participate in management and are interested in what the other members are doing.

The demographics for the 7 research universities in Alabama, which is in the Southeastern region of the U.S., has changed in the past 50 years. UAB with 16,000 students is 26% minority. UA, AU, and UAH together are about 14% minority, and USA has drastically changed its minority enrollment strategy and is 20% minority. Together the majority enrollment research universities in Alabama have almost twice as many minority students as the 2 major research HBCU universities, AAMU and TU.

- Institution of Higher Education (Bachelor's and/or Graduate Degree Granting): 7 (Alabama A&M University, Auburn University, The University of Alabama, The University of Alabama in Huntsville, The University of Alabama at Birmingham, University of South Alabama and Tuskegee University).
- Institution of Higher Education (Community College/2-Year Institution): 1 (Calhoun Community College).
- Government (Federal/State/Local): 1 (MSFC; Ex-officio member of ASGC Management Team).
- Industry: 4 (The Boeing Company, Lockheed Martin Corporation, Jacobs Technology, Inc. and Teledyne Brown Engineering, Inc.).
- Museum/Science Center/Planetarium: 1 (U.S. Space and Rocket Center).