

Louisiana Space Consortium
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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 Louisiana Space Consortium (LaSPACE) is a Designated Consortium funded at a level of \$575,000 for federal fiscal year 2011.

PROGRAM GOALS

The LaSPACE Strategic Goals are formulated into five areas, consistent with the Outcomes in the NASA Education Strategic Coordination Framework. Objectives follow directly from the Goals.

LaSPACE Strategic Goal 1: Foster aerospace related, interdisciplinary, science, technology and engineering research and education at Louisiana colleges and universities (NASA Outcome 1).

This goal involves (1) enhancing student and faculty research, (2) training graduate and undergraduate students, (3) providing hands-on flight opportunities, and (4) supporting student internships, competitions and design projects.

LaSPACE Strategic Goal 2: Encourage aerospace related industries in Louisiana for economic development and diversification (NASA Outcome 1).

Implementation includes working with the Michoud Assembly Facility, developing interactions between industry, students and faculty and making information available to students.

LaSPACE Strategic Goal 3: Promote and contribute to science, technology, engineering and mathematics pre-college education excellence (NASA Outcome 2).

Targeted programs for middle and high school educator training and school district programs are the main tools to achieve this goal.

LaSPACE Strategic Goal 4: Engage and educate the general public in NASA's space exploration projects, benefits and opportunities as well as Louisiana's role in the NASA program (NASA Outcome 3).

Informal education plus public outreach events contribute to this goal.

LaSPACE Strategic Goal 5: Maintain a cooperative, effective and inclusive consortium of Louisiana institutions to promote aerospace related research, education and economic development.

This requires effective program management, communication and increasing stakeholder involvement.

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

The High Altitude Student Platform (HASP) project pulled off a new 'first,' flying twice in as many weeks from the NASA facility at Ft. Sumner, NM. The HASP-2010 flight had been cancelled by NASA, since NASA had not completed its new flight regulations. Thus, we had to fly the HASP-2010 payloads, recover, unload, refurbish, reload with HASP-2011 payloads and fly again. This was accomplished within nine days in Sept. 2011. Both sets of payloads are being analyzed by the students. (Benefit to Outcome 1)

An experiment developed by a student team from Copper Mill Elementary School in the Zachary Community School District (ZCSD) in Louisiana was selected by the "Student Spaceflight Experiment Program (SSEP)" for flight on STS-134 during April, 2011. The experiment was developed by grade 5 students, Alexis Albert, Grace Dry, Madison Russell and Leanne Sorrel, with assistance by local scientists Tyler Jackson and Jake O'Brien and support from LaSPACE. ZCSD was one of only 16 teams, nationwide, selected for this 'maiden' SSEP flight. After several delays, STS-134 launched in late May, 2011 and landed with the experiments on 1 June, 2011. (Benefit to Outcome 2)

The Academy of Engineering (AOE) program at Scotlandville Magnet High School (SMHS), a primarily minority school in north Baton Rouge, has been selected by the National Action Council for Minorities in Engineering (NACME) to receive a grant of \$7,000. underwritten by the generosity of AT&T. The award was presented at a ceremony on 4 October 2011. The funds will help purchase equipment and materials for the engineering classrooms. LaSPACE works with AOE at SMHS, supporting teacher training and serving on the advisory council. SMHS is one of only 10 schools selected from across the country for this support because of their commitment to enhance STEM learning for minority students. (Benefit to Outcome 2)

PROGRAM ACCOMPLISHMENTS

LaSPACE Strategic Goal 1: Fellowship and Scholarship (NASA Outcome 1)

Graduate Students: Twenty students received some support as Fellows or GSRA awardees during the past two years. Moreover, it was a strong year for graduations. Eight students received advanced degrees (Master or Ph.D.) at May, 2011 commencements, one graduated in December, 2011, one other left school to pursue employment while another changed to a non-STEM major. Five Fellows continued through the academic year along with four GSRA students. This meets the metric in our base budget. Longitudinal tracking for these students is underway. With this ‘pulse’ having worked through the system, LaSPACE will be opening new graduate student competitions in the FY12 program year.

Undergraduate Students: Between our LURA and MRS programs, we had 14 students involved in major awards, five from FY11 awards. This achieved or exceeded our goal for significant undergraduate student awards in these programs. Nine of these students finished projects in the 2011 program year and five are continuing through the current academic year. Through the “Scholars” efforts at Xavier and Southern University, we involved 13 new, minority students in STEM studies, exceeding our proposed metrics. Additional students working on LaSPACE projects on other campuses bring the total to over two dozen undergraduates that are being served.

LaSPACE Strategic Goal 1: Research Development (NASA Outcome 1)

REA and URP: In this area we met or exceeded our planned goals with four new REA grants and the completion of six on-going URP awards. Projects involved researchers at four research institutions (SU, LaTech, ULL, LSU) ranging from Earth Science using remote sensing, to new aerospace materials, to a potential sub-orbital investigation on the *Blue Origin Co.* vehicle. The four new projects target (1) The efficiency of Carbon nanotube based energy harvesting technology – LaTech, (2) Process development and properties of nanofiber reinforced composites for aerospace applications – ULL, (3) Modeling impact damage in aerospace structures – LSU, and (4) Algorithm development for simulations and modeling of aerospace systems – ULL. Additional students are involved through these projects.

RIG: We received our first Research Initiation Grant (RIG) proposal in over five years. The RIG program is designed for non-research institutions to bring faculty and their undergraduate students into the R & D environment, both for the research experience and to utilize the faculty talent at these universities. Loyola University in New Orleans will now be involved in aerospace related research through a LaSPACE RIG award.

LaSPACE Strategic Goal 1: Higher Education (NASA Outcomes 1 and 2)

Internships: We had seven Louisiana students selected for summer, 2011 internships at NASA centers. Two went to LaRSS; one worked at SSC and the robotics academies at Ames and MSFC each had one. Moxley attended the Lunar and Planetary Academy at GSFC, and one student engaged in the regular internship program at MSFC. We were proud when the National Space Grant Foundation named Frederick Moxley III as a John

Mather Nobel Scholar for 2011. Moxley is now a PhD student at Louisiana Tech University, working to correlate solar wind and exosphere data for the moon and Mars. The distinguished prize includes a \$3,000 travel allowance for presenting research at professional conferences.

Student Ballooning: The LaACES student ballooning project continued training students. We had a successful launch trip for the LaACES (10 - 11) students in May, 2011. For LaACES (11 - 12), we now have new student programs at LaTech, Loyola and Xavier joining the students from LSU, SU, UNO and, possibly, Grambling this year. Payloads are now being constructed/tested for a May, 2012 launch campaign, which could set a record if all of the payloads are completed.

LaSPACE conducted a Faculty Workshop on ballooning for interested Louisiana faculty during December, 2011. This sparked new interest and has led to the establishment of several new student ballooning programs within the state's universities.

The PACER program continued with providing advanced experiences for three returning teams from MSIs Norfolk State, Central State and Knoxville College. These teams collaborated on the development of an advanced payload for HASP and successfully integrated their payload with HASP in early August, 2011. They then participated in flight operations in September and are currently analyzing the flight data.

The HASP program had a great year. Due to the NASA imposed moratorium on all balloon launches, HASP-2010 was cancelled with a possibility of re-scheduling for spring/summer, 2011. Meanwhile the HASP-2011 payloads were selected and proceeded to development. Unfortunately, NASA refused a spring 2011 launch for HASP-2010, so we had to plan to launch both HASP-2010 and HASP-2011 in September, 2011. This was accomplished with a HASP-10 launch on 8/31/11 followed by HASP-11 on 9/8/11. The HASP team (and CSBF personnel) are to be congratulated for their exceptional work. The one downside was that several HASP-2011 teams had to cancel due, in some cases, to the delayed arrival of FY11 Space Grant funding which pre-cluded their finishing the payload. These teams are back for HASP-2012 which is now over-subscribed.

Senior Design: LaSPACE is assisting three Senior Design teams with Aerospace related projects. All three are at LSU, two in Mechanical Engineering and one in Electrical and Computer Engineering. These teams are led by Professors Martin, Trahan and Guo and involve thirteen senior engineering students. In addition, a second design project led by Prof. Guo is receiving support from NASA ESMD. These projects will complete in May 2012 prior to spring graduation.

LaSPACE Strategic Goal 2: Aerospace Industry Involvement

LaSPACE has solidified its new relationship with Jacobs Engineering, the support contractor for the Michoud Assembly Facility in New Orleans. Jacobs supports the LaSPACE-Michoud Education Fellows program as well as working with our summer

students program. Our Jacobs/Michoud institutional representative gave the keynote talk at the November, 2011 LaSPACE Council Meeting.

An aerospace “jobs” section on the LaSPACE website, from which students can learn about the types of openings that are available, continues to grow. LaSPACE also worked with the state committee that produced a new framework for research and economic development in the state – FIRST LOUISIANA (Fostering Innovation Through Research in Science & Technology in Louisiana).

LaSPACE Strategic Goal 3: Pre-College Education Excellence (NASA Outcome 2)

The NASA Wallops Flight Facility and the Balloon Program Office proposed a summer, 2011 “course” for high school teachers – two of the 30 teachers came from Louisiana. LaSPACE was asked to develop, coordinate and ‘teach’ this week long course. Our LaACES team, aided by the folks at the Columbia Scientific Balloon Facility (the venue for the summer event) managed to consolidate the essence of the Student Ballooning Course into an intensive week long, hands-on program for the teachers. This “Wallops Ballooning Experiences for Educators (WBEE)” was highly successful, based upon the feed-back from the teachers and has led to one new high school program of which we are aware. Follow-up is in progress. Plans at NASA Wallops are to try to schedule a WBEE-2 for summer, 2012, and LaSPACE personnel will, again, be the instructors.

We continued work with the pre-engineering program at Scotlandville Magnet High School (SMHS) and their feeder program at Scotlandville Middle School. SMHS achieved full national certification from *Project Lead the Way* (PLTW) and has now been awarded an Academy of Engineering (NACME) grant for program development (see highlight in previous section). Also, the school was interviewed by a team from Weyerhaeuser Forest Products as an example for other schools to follow. Wefel served on the Advisory Committee Panel for that interview.

A new expansion of the LaACES program to high school students is underway with a team of students (four) from Zachary High School, led by physics teacher Mark Arseneault, who participated in the WBEE workshop. They are moving through the Student Ballooning Course and building a payload for the May, 2012 campaign. Advanced Aces student Katherine Blackburn (senior, EE major) is mentoring the Zachary High School Team.

An interesting side-bar: The Advocate in Baton Rouge recently featured a Zachary High School (ZHS) student who aspires to be an engineer. Eddie Veal, 14 years old, said “I just like building things. I think engineering is fun. If something breaks, I like trying to fix it or trying to make it better.” Veal participates in the LaACES program through LSU and along with three other ZHS students, is currently building a balloon payload in order to measure environmental conditions at 100,000 ft.

The LaSPACE/NASA Michoud Education Fellows (MEF) program provided new results. The MEF-3 teachers from St. Tammany Parish and Zachary Community School District

presented their academic year classroom experiences at a ‘graduation’ program in April, 2011 at the Michoud Assembly Facility. In summer, 2011 the MEF-4 educators began the next phase of the program. The MEF-4 cadre has been using the materials they developed during the current school year and will report on their outcomes at the MEF-4 ‘graduation’ on 9 May, 2012. The results in terms of student interest/learning achieved by the MEF-3 teachers was impressive and demonstrated that the program is achieving results.

Partnering with the Texas Space Grant Program, two Louisiana teachers were able to take advantage of LiftOff-2011, receiving NASA classroom materials and advanced training.

A new partnership opportunity presented itself last year with the conclusion of arrangements between Nano-Racks, LLC and the National Center for Space Science Education to establish the Student Space Experiments Program (SSEP) to allow K-12 school districts to propose to fly a student experiment on STS-134, STS-135 and now on the ISS. LaSPACE partnered with the Zachary Community School District (ZCSD), with Lead Educator/Coordinator Tammy Woods, to bring this initial opportunity to Louisiana (see highlight above). The education experience for students, teachers and parents was completed this year with the (delayed) flight of STS-134. The team also presented its project at the National Air and Space Museum in Washington, DC in June, 2011.

Moreover, in the K-12 area we estimated that (1) 70% of educators in our training programs use NASA resources, and (2) 65% of educators in short duration training would use NASA materials. Both of these targets were met.

LaSPACE Strategic Goal 4: Enhance and Educate the General Public (NASA Outcome 3)

LaSPACE affiliate Sci-Port, the Louisiana Science Center in Shreveport, completed a project entitled “Hubble Science & Art Educator Workshop, Student Workshop and Public Lecture Art Show” which featured professional artist Jodie Forrest. Her space art was displayed in conjunction with the GSFC traveling exhibit ‘Hubble Space Telescope: New Views of the Universe.’ This was a unique opportunity to bring together two related media for (1) the general public, (2) a focused workshop for three different middle schools and (3) a special workshop for educators from the three parishes in NW Louisiana. Presenters were artist Jodie Forrest, local astronomer Laura Whitlock and NASA educator Cathy Williamson. Feedback from the participants was excellent.

Other projects discussed above involve some aspect of informal education, particularly parental involvement, through the derived activities connected to the projects. For example, the SSEP project with Zachary drew in parents, community volunteers and even school board members to become actively involved in this student space science effort, including viewing an exceptional ISS pass over Louisiana.

Our formal program involves the Mobile Astronomy Resource System (MARS), a panel truck outfitted with telescopes and display systems, along with science demonstrations.

The goal is for MARS to reach underserved communities, public venues (e.g. Earth Day), public nights at schools, science expos, the Sally Ride program for girls and other such opportunities. Unfortunately, MARS suffered some interior water damage during a strong thunderstorm season, and efforts to re-furbish it curtailed much of the planned activity. We plan to expand the reach of the MARS program with new materials in the coming year.

PROGRAM CONTRIBUTIONS TO PART MEASURES

- Student Data and Longitudinal Tracking:

During FY11, LaSPACE impacted ~109 undergraduate or graduate students through its programs. Major new awards went to eight graduate students and 13 undergraduates with smaller awards or project support helping out additional students. Eliminating students with previous awards, we are adding 20 continuing students to the longitudinal tracking matrix, giving 80 - 100 students being tracked. While final tracking numbers are still being worked, it is clear that we should come close to meeting our tracking objective.

For the FY11 program year, we graduated about a dozen students, most going into further higher education or into STEM employment. (No students were hired by NASA.) Four other graduate students left the LaSPACE program, one for a more lucrative fellowship, one for STEM employment, one changed to a non-STEM major and the last extended her graduate study for an additional year beyond maximum eligibility.

As part of our FY10 proposal, we estimated that (1) 60% of the higher education program students would be moving to aerospace or STEM educational employment, (2) 50% of undergraduates would move on to STEM related higher education, (3) we would have ~30 underrepresented students in the program and (4) would involve at least 12 institutions (EPSCoR state). From our preliminary tracking data, it appears that these targets will be met for FY11.

- Diversity:

In our FY10 proposal, we set as a goal to increase minority and female participation by 5% per year (over the FY09 base) until the Louisiana NCES targets were reached. Subsequently, we would strive to maintain or exceed those targets. In FY10, our results for Direct Participants (Table A.1 in the 2010 NASA report), show that we have nearly achieved our NCES targets. For FY10 our percentage of minority students was 37.5%. Increasing this by 5% means our target is a minority percentage of $0.375 \times 1.05 = 39.4\%$ for FY11. Using the link to the NCES site provided by NASA, we find that, for Louisiana students, the all minority ratio (Blacks + Hispanics + Pacific Islanders + American Indian) is 36%. Thus, we achieved the NCES “target” and hope to exceed it, or, realistically, maintain such participation at the NCES target level. Similarly, for female participants, our FY11 target is also 39.4%. In this case, the NCES site gives a ratio for full time female students in the Louisiana student population of 40.1%. Thus, our comprehensive target is very close to the NCES percentage.

The LaSPACE consortium includes all of the state's four year HBCU institutions and all participated actively in recent LaSPACE council meetings, including their students presenting posters about their work. The LaSPACE Council (all institutional representatives) is composed of 25 members with one current vacancy. Of those 24 active members, five are female and 3 are minority. This composition remains unchanged from last year.

LaSPACE management includes two females and two African-Americans among the five principal staff (one of which is advisory). Part-time staff number four, two of which are female and none are minorities. This is an increase in under-represented participation. LaSPACE projects/students/activities are overseen by faculty and staff at the member institutions. There were approximately 47 such people involved this past year of which 10 were minority and 13 were female.

Of the 20 graduate students receiving some type of support from LaSPACE, five were minority and seven were female. Seven other graduate students were involved through research projects and this cadre included 2 females, one minority and one 'unreported.' Among the 14 undergraduates receiving major awards, three are minority and four were female. Of the nineteen undergraduates that were in the Institutional Scholars program, 10 were female and 18 were minority students. There were additional students impacted through the ballooning activities, senior design projects and the like – approximately 60 – but diversity information on these (non-tracked) students is incomplete.

- **Minority-Serving Institution Collaborations:**

All five MSI affiliates are engaged in various collaborative efforts with LaSPACE. Currently, Xavier University, Grambling State University and Southern University and A&M College are supporting about 10 students developing balloon payloads for the joint LaACES balloon launch scheduled for May 2012. In addition, Dillard University and Southern University – New Orleans participated in the December 2011 LaACES Faculty Workshop and anticipate developing a LaACES student group for the 2012-2013 academic year. Further, Xavier University is participating in the LURA program and has three students engaged in undergraduate research projects. In addition, the Scholars program has very good participation from both Xavier and Southern University – Baton Rouge where, during 2011, 13 new students were added to the 24 students who have already participated in this program.

During 2010 we modified the Research Enhancement Award (REA) guidelines to encourage development of multi-institution proposals involving collaborative research projects between majority and minority institutions. During the 2010 REA competition two such investigations (both between LSU and Southern University – Baton Rouge) were rated highly by external reviewers and awarded funding. These projects are ongoing and final reports are expected during 2012. During the 2011 REA competition no multi-institution collaborative projects were proposed and the 2012 REA competition proposals are due at the end of April 2012.

Finally, LaSPACE collaborates with the predominantly minority Academy of Engineering program at Scotlandville Magnet High School in Baton Rouge. This was discussed above.

- NASA Education Priorities:

LaSPACE is engaged in two major authentic, hands-on student experiences for science and engineering disciplines. These are the LaACES and HASP student ballooning research programs that were discussed earlier in this report. During spring of 2011 18 students from Grambling, LSU and Southern – Baton Rouge participated in the balloon flight of six student designed and built payloads. During the fall of 2011 we began the 2011 – 2012 LaACES academic year and started with about 25 new students at LSU, UNO and SUBR.

One of our base-program metrics in this area was to increase the number of institutions regularly participating in LaACES by one every two years. Thus, the fall LaSPACE Council meeting emphasized the institution advantages of LaACES participation and we implemented the LaACES Faculty Workshop mentioned earlier in this report. These efforts resulted in LaTech and Loyola joining the program late fall 2011 adding nine more students, while Xavier joined during the spring of 2012. Dillard and Southern – New Orleans, who attended the LaACES Faculty Workshop, anticipate developing student teams for the 2012 – 2013 academic year.

The HASP program supported two flights of the platform during the September 2011 balloon operations in Ft. Sumner, NM. During these two flights 13 student payloads were supported involving almost 200 students from 12 states around the country. Three payloads were developed by 11 Louisiana students. One of these payloads was flown by the NASA Balloon Program Office as a free-flyer during spring 2011 so that the student involved could obtain the flight data he needed for his Master's Degree thesis in a timely manner.

In addition, LaSPACE is supporting three engineering senior design teams in the 'aero' area. All are hands-on projects involving the design, construct, test and fly project development cycle. We anticipate a micro-air-vehicle, a semi-autonomous flying robot and a new solid oxide fuel cell to be demonstrated by the end of this semester.

Engagement of middle school teachers in hands-on curriculum enhancement capabilities is discussed earlier in this report under Program Accomplishments LaSPACE Strategic Goal 3: Pre-College Education Excellence.

One of our on-going REA projects utilizes NASA Earth Science remote sensing data to try to predict outbreaks of the Norovirus in oysters, one of the leading causes of gastrointestinal illness in the United States. This joint LSU – SU project combines MODIS data from the Aqua and Terra Satellites into a new GIS application that includes

a predictive outbreak model. Testing is underway using oyster beds off the coast of Louisiana.

While not specifically identified in our metrics, we are attempting to enhance involvement of community colleges in LaSPACE programs. A multi-institution REA proposal, discussed above, could be used to enhance research capability and student involvement at a community college in collaboration with a majority institution. Further, the Consortium Sustaining Grant (CSG) program specifically enables outreach by LaSPACE affiliates to local community colleges. This is an on-going effort which we intend to pursue in the coming year.

Enhancing the diversity of institutions, faculty, and student participants in LaSPACE program was called out in our FY10 base proposal as a high priority. As has been discussed elsewhere in this report we have made significant progress in this area, meeting (or close to meeting) the Louisiana NCEES target levels for diversity participation.

IMPROVEMENTS MADE IN THE PAST YEAR

- LaSPACE Council Meetings moved to a regular fall meeting schedule. With the inability of LSU-Shreveport to host the fall, 2011 meeting it was moved to our newest affiliate site – LASM in Baton Rouge. The meeting included a student poster session providing the students an opportunity for networking and the institutional representatives a chance to see the quality of the student research as well as a tour of the magnificent planetarium facilities.
- The LaSPACE Newsletter, “The Space Porter” – Space OpPORTunities for Educators and Researchers – continued with a Fall, 2011 edition. A spring, 2012 publication is ready for distribution.
- Our new Program Coordinator, Ernecia Guidry joined us in May, 2011, has attended several Space Grant meetings, and is now handling subawards, publicity and other tasks.
- T. G. Guzik was named a tenured Professor. These changes necessitate a revision to the base budget plan which was submitted as part of the FY11 Augmentation proposal package. Guzik was selected by the Council to become the new Project Director upon Wefel’s retirement next year.
- The Fellows annual stipend has been increased to \$26K for PhD degree students and to \$21K for master degree students to take into account the tuition increases that have taken place due to major reductions in state funding to higher education.

PROGRAM PARTNERS AND ROLE OF PARTNERS IN PROJECT EXECUTION

Consortium members include colleges/universities [Research Intensive (RIU); Research Active (RAU); Four year institutions (4YI)], HBCU's, business/industry partners (B/I), state education boards (Ed), and nonprofit organizations (NPO), structured as Active

Members (AM), and Inactive Members (IM). The LaSPACE Council, composed of the institutional representatives from each affiliate, provides advice and direction to LaSPACE management. In November, 2011 the LaSPACE Council meeting was hosted by the Louisiana Arts and Science Museum in Baton Rouge.

Dillard University (Dillard)	AM, HBCU, 4YI
Grambling State University (GSU)	AM, HBCU, 4YI
Jacobs Technology, Inc. at Michoud (Jacobs)	AM, B/I
Louisiana Arts and Science Museum (LASM)	AM, NPO
Louisiana Board of Elementary & Secondary Education (BESE)	AM, Ed
Louisiana Board of Regents (BOR)	(Co-founding Institution) AM, Ed
Louisiana Business and Technology Center (LBTC)	AM, B/I
Louisiana State University and A&M College (LSU)	(Lead Institution) AM, RIU
Louisiana State University of Shreveport (LSU-S)	AM, 4YI
Louisiana State University Agricultural Center (LSU-Ag)	(Research and Extension) AM, RIU
Louisiana Tech University (LaTech)	AM, RAU
Loyola University (Loyola)	AM, 4YI
McNeese State University (McNeese)	IM, 4YI
Nicholls State University (Nicholls)	AM, RAU
Northwestern State University of Louisiana (NWSU)	AM, 4YI
Recreation & Park Commission for the Parish of East Baton Rouge (BREC)	AM, NPO
Sci-Port Discovery Center (Sci-Port)	AM, NPO
Southeastern Louisiana University (SELU)	AM, 4YI
Southern University and A & M College (SU)	(Co-founding Institution) AM, HBCU, RAU
Southern University of New Orleans (SUNO)	AM, HBCU, 4YI
Tulane University (Tulane)	AM, RIU
University of Louisiana at Lafayette (ULL)	AM, RAU
University of Louisiana at Monroe (ULM)	AM, 4YI
University of New Orleans (UNO)	AM, RAU
Xavier University of Louisiana (Xavier)	AM, HBCU, RAU