



The National Science Foundation  
Illinois Louis Stokes Alliance  
for Minority Participation

**OPENING DOORS**  
to our future with  
**Science,  
Technology,  
Engineering  
&  
Mathematics**

celebrating  
**18**  
years of **illinois**  
**LSAMP**

Program Impact  
Report

1993 - 2011



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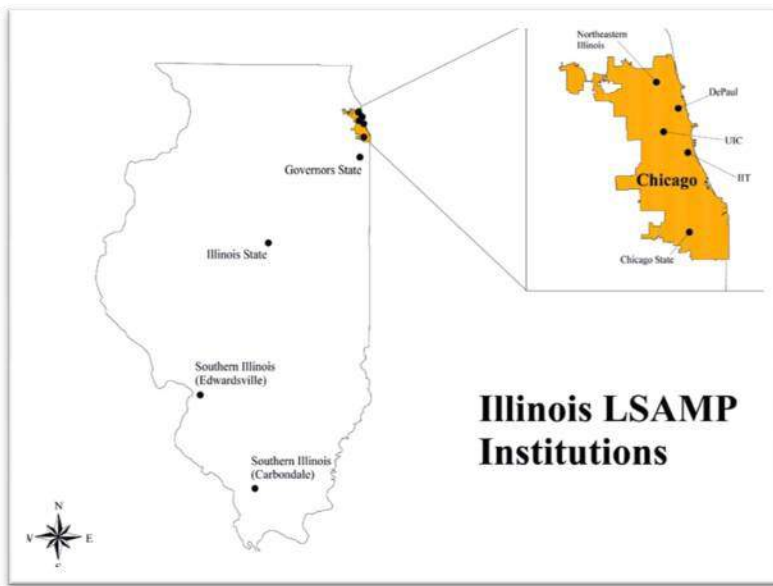


## PROGRAM SUMMARY

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### Overview

The Illinois Louis Stokes Alliance for Minority Participation (ILSAMP) program was formed in 1993 to significantly increase the number of underrepresented minority scholars earning degrees in science, technology, engineering and mathematics (STEM) disciplines. ILSAMP originally consisted of six (6) universities within the city of Chicago. Today the Alliance is composed of fourteen (14) institutions and one federal laboratory. Of the 14 institutions there are eight (8) four year universities, one (1) senior institution, and five (5) community colleges. The federal laboratory participant is Argonne National Laboratory. Chicago State University (CSU) is the lead institution. It is joined by DePaul University (DPU), Illinois Institute of Technology (IIT), Northeastern Illinois University (NEIU), University of Illinois at Chicago (UIC), Illinois State University (ISU), Southern Illinois University at Edwardsville (SIUE) and Southern Illinois University at Carbondale (SIUC). The one senior institution is Governors State University (GSU). The five (5) community colleges are Olive-Harvey College (OHC), Wilbur Wright College (WWC), Kennedy-King College (KKC), Harry S Truman College (HTC) and St. Augustine College (SAC). Northwestern University, Loyola University, Richard J. Daley College, Harold Washington College, Malcolm X College, and South Suburban College were all former members of the Alliance.



The program is unique in the unprecedented amount of cooperation that has developed between institutions of such diverse missions, governing structures, size, and student characteristics. Ours is a complex group of private religious, private technical, large public, research institutions, community colleges and teaching institutions. We have developed a number of innovative programs that have been successful at one institution and imported to the other institutions. These institutions have successfully established a statewide coalition dedicated to increasing the number of underrepresented and underserved students in STEM.



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This configuration and the strategic locations throughout Illinois enable the Alliance to reach a large and diverse student population. The alignment provides access to more research opportunities for undergraduate students and access to more graduate schools. National Science Foundation (NSF) funding has allowed us to develop innovative recruiting models for new outreach efforts to support graduate education in the form of Bridge to the Doctorate. These institutional additions set the stage to provide a broader vision and more complete and comprehensive planning as the Alliance developed a statewide team to accomplish the goals set forth in the cooperative agreement with the NSF. ILSAMP scholars as well as faculty have benefited greatly from the inter-institutional nature of the Alliance. These relationships have grown stronger producing more cooperative activities over time.



ILSAMP is particularly proud of its community college involvement. The Alliance has shown that collaborative efforts can make a difference. With an increasing number of students beginning their academic careers at two-year colleges, strategies were developed that addressed the needs of these students. Students attending a

community college not only face an array of undergraduate decisions about course work and a major, they must ensure that courses chosen will receive credit from a four-year institution upon transfer. Transfer Centers funded by the State of Illinois assist students in making the commitment to continue their education beyond the Associate degree. ILSAMP institutions developed articulation agreements and collaborative programs with local community colleges. ILSAMP community colleges have developed programs in association with the senior colleges with which they are closely affiliated. The purpose of these programs is to increase the number of students transferring to senior colleges in STEM areas. Working closely with the senior partners, the community colleges are using: the Transfer Centers; math, science, and engineering faculty; Student Services/Counseling departments; and data to identify students for ILSAMP activities. Programs are designed to increase transfer rates of urban underrepresented STEM majors from the community colleges to baccalaureate granting institutions by:



- Strengthening advising and orientation programs for community college students;
- Increasing ILSAMP-community college faculty seminar exchange programs; and,
- Increasing opportunities for community college students and faculty to become part of research projects.



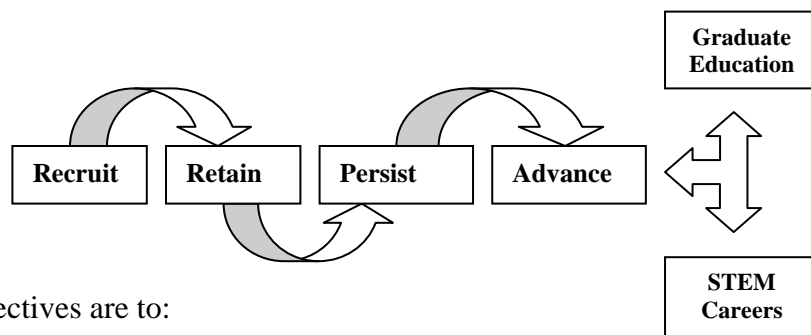
## Impact

The impact that the ILSAMP has had on students, faculty, academic institutions and the communities in Illinois has been impressive. More students have found inspiration and assistance to help them reach STEM degree goals, increasingly research faculty have mentored underrepresented minority students and stakeholders (internal and external) have provided recommendations, defined issues and options, and have made suggestions for scholarships, internships and possible career opportunities. Interaction and cooperation between very different academic institutions have become a viable reality. The aspirations of underrepresented and underserved students have been increased as they mingle with students and faculty from other schools and interact with noted scientists and professionals during workshops, conferences and travel. These activities have come about primarily because of the actions of the institutions in the ILSAMP consortium and the support of the NSF.

## Goals

The goal of the program is to broaden STEM participation by increasing the number of underrepresented students who:

1. Choose and persist in STEM academic disciplines;
2. Attend graduate school in STEM; and,
3. Are prepared to pursue and obtain professional careers in STEM fields.



## Objectives

The program objectives are to:

1. Continue institutionalization of effective activities developed by ILSAMP;
2. Enhance individual student performance and increase the number of underrepresented minority students who choose to major and graduate in STEM disciplines;
3. Increase the emphasis on student progression to graduate school through preparation and the development of pathways to graduate study for STEM baccalaureate recipients; and,
4. Establish international opportunities that will enable students to understand and participate successfully in global science endeavors.

## ACTIVITIES AND FINDINGS

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### Faculty Mentoring

Faculty mentoring is crucial to establishing a successful student development program. Research faculty members have anxiously taken bright students into their labs and enthusiastically mentored them in the philosophy, theories and technical aspects of STEM disciplines. In the mentoring role, faculty members have helped their protégés select, design and prepare research projects; discussed their academic needs; helped them explore and understand career options; and encouraged them to maintain high personal and academic standards. Some Alliance Coordinators have worked with faculty to convene focus groups of ILSAMP students to discuss issues and problems common to members of the group.



### Research Experiences



A number of studies have indicated that retention in STEM is positively correlated with a student's research experiences. ILSAMP students participate in internal (on-site) and external (off-site) research projects in the STEM disciplines. This research grounds them more strongly in the discipline, teaches them valuable skills and techniques needed to conduct innovative research, and provides impressive experience for their resumes.

### Workshops

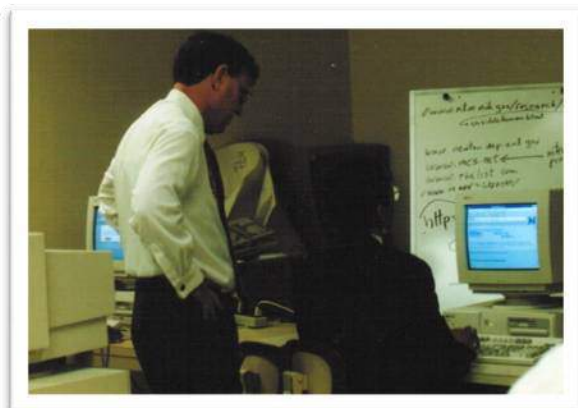
Specially designed study skills workshops for STEM disciplines are offered to students throughout the academic year at each of the ILSAMP institutions. Topics range from note-taking and test-taking skills in STEM courses to studying calculus problems and understanding STEM concepts. GRE workshops and/or courses are also provided to help students prepare for graduate school.





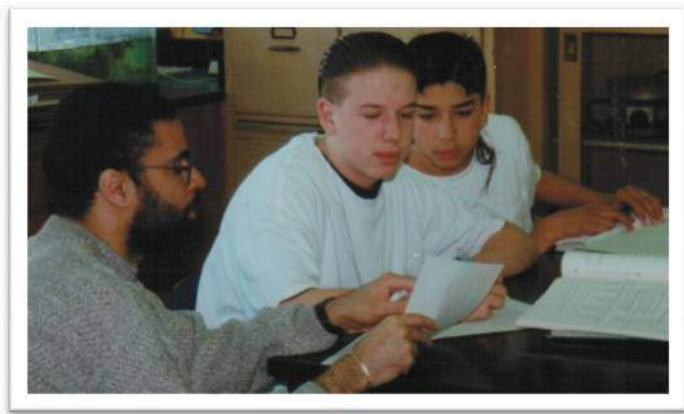
## Career Exploration

Career exploration information is provided by the different institutions. These efforts are managed independently. There may be multiple ways of providing this information. Career information comes in the form of orientation workshops; seminars with STEM professionals; formal credit bearing STEM career exploration classes; or regular programs established by university Career Placement Services (CPS). CPS also explores the students' aptitude and interest in their majors, discuss academic requirements for certain fields, and provide information about internships and externships in the STEM disciplines. Some of these workshops are managed by STEM student organizations.



## Media Centers

Media Centers have been established at several ILSAMP institutions. A facility containing computers, interactive science and mathematics instructional software, study areas and an area for students to socialize between classes has been established at a number of ILSAMP institutions. The center, often termed "Drop in Centers" also integrates appropriate campus faculty and programs. Guided Homework often takes place in this Center, providing drill and practice sessions for STEM courses in the presence of a peer expert who is usually an ILSAMP student. The center also hosts STEM club meetings and events.



## Specialized Tutoring

Several partners provide ILSAMP students specialized tutoring (not otherwise offered at the University) in gate-keeper courses such as College Physics I and II, General Chemistry I and II, Organic Chemistry I and II, Intermediate Algebra, College Algebra, Calculus I and Cell Biology.

## National Laboratory Involvement

For the past ten (10) years the Alliance has successfully acquired NSF supplements to support summer research experiences of ILSAMP participants at Argonne National Laboratory (ANL). As illustrated in the following table, the research fellows have consisted of faculty, community college students, and undergraduates from various ILSAMP institutions. Several ILSAMP FaST faculty members have continued their summer research during the academic year during the past few years.



The 10-week summer experiences at ANL allowed both faculty and student participants to contribute to and be on the ground floor of new ideas and exciting projects, and add to the diversity of the science and engineering workforce in national laboratories.

Argonne National Laboratory ILSAMP Summer Research Participants											
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Faculty	1	1	4	6	5	7	6	7	6	5	48
Students	1	4	19	14	10	16	15	16	11	11	117
Grand Total	2	5	23	20	15	23	21	23	17	16	165

Another advantage of the ILSAMP-DOE collaboration is the potential for ILSAMP faculty to develop sustainable research relationships with ANL laboratory investigators. For example, the collaborations has led to joint publications and patents, Visiting Professor and Guest Faculty appointments, acquisition of high performance equipment and external grants, and joint oral and poster presentations at conferences.

### Student Organizations



A number of programs exist on the different campuses to support and retain students in STEM disciplines. These organizations are student focused and function to help students explore and clarify professional values, discover their personal capacity, develop team work, and socialize with others who have similar interests. Student organizations provide opportunities for the enhancement of academic, cultural, and social aspects of student college life through participation in group programs and activities. Student organizations provide educational experiences that broaden students' knowledge and enthusiasm for their chosen STEM area, enhance opportunities to participate in conferences that relate to STEM, increase opportunities to gain skills in leadership positions as well as functioning as an effective group member. These organizations provide peer and professional support and motivation and assist students to develop a more positive and realistic attitude toward themselves, their peers and their college. They also get the opportunity to participate in activities that develop their laboratory, presentation and career networking skills. These strategies inspire students to want to continue their education, thus increasing academic retention. ILSAMP students are encouraged to participate in the science clubs on each campus.



Among the ILSAMP student organizations are: the Society for Advancement of Chicanos and Native Americans in Science (SACNAS), the National Organization of Black Chemists and Chemical Engineers (NOBECE) and the National Society of Black Engineers (NSBE). Other

active organizations include student affiliate chapters of the American Chemical Society, Tri Beta Biology Honor Society, Illinois Chapter of National Science Teachers Association and the Society of Physics Students.

### **Annual Student Research Symposia**



Students participate and present at annual student research conferences sponsored or supported by the ILSAMP Consortium in Science, Technology, Engineering and Mathematics. Some of which include ILSAMP Student Research Symposia, the Annual Argonne Symposium for Undergraduates in Science, Engineering and Mathematics, the Board of Governors Annual Student Research Conference, and the Illinois State University Graduate and Undergraduate Research Symposiums. In addition, faculty members have been instrumental in exposing students to conferences of professional societies. These conferences have provided ILSAMP students with exposure to research and internships. It also provides them with the opportunity to make professional presentations and develop their networking skills.

Impact is about showing that ILSAMP has made a difference. The ILSAMP student research symposium brings together students, faculty and staff from all ILSAMP institutions to share and learn from each other through career panels, success skills workshops and mentor-protégé relationships. The student research conference provides an arena for developing community among participants; to get students involved by submitting a proposal to present the results of their research work; to provide a forum for students to present research accomplishments through poster or oral presentations; to foster the value of ILSAMP as a learning community and to immerse students in an academic culture. These gatherings have made a substantial enhancement to student's lives.



The Twelfth Annual Illinois LSAMP Student Research Symposium was held at the Hilton Hotel Suites and Drury Lane Convention Center in Oak Brook, Illinois, with more than 350 students, faculty, administrators and staff participating. The theme of the symposium was “International Partnerships



to Bridge the Global Divide.” The conference, which included workshops, poster and oral presentations, luncheon and dinner banquets, provided participants from the Alliance institutions an opportunity to come together in camaraderie to share results of research, compare notes, relate experiences, and to develop closer relationships. One of the highlights of the conference was the surprise visit by Dr. Walter Massey and his wife Shirley. Dr. Massey, the ninth Director of the National Science Foundation, former president of Morehouse College and current president of the School of the Art Institute of Chicago, gave well received remarks of inspiration to the assemblage. Illinois LSAMP is gearing up for the Thirteenth Annual Student research Symposium.

An important aspect of the conference is the keynote address presented by prominent speakers invested in the advancement of STEM education. Through these conferences, students have been exposed to a broad array of speakers and presenters. Among past presenters were: Dr. Shirley Malcom, American Association for the Advancement of Science; Captain Michael Anderson, NASA Astronaut; Dr. Arthur J. Hicks, NSF LSAMP Project Director; Honorable Emil Jones, Illinois State Senator; Honorable Luis Gutiérrez, US Illinois 4<sup>th</sup> Congressional District; Dr. Rick Kittles, African Ancestry Inc. and Associate Professor in the Department of Medicine at the University of Chicago; Dr. Hazel Symonette, Program Development Specialist at the University of Wisconsin, Madison; Mr. Cordell Reed, Retired Senior Vice President of Commonwealth Edison and Board President of CSU Foundation; Dr. Julian M. Earls, Director of the NASA Glenn Research Center; Mr. Armstead Ward, Vice President Human Resources, Sara Lee Bakery Worldwide; Dr. Woodrow Whitlow, Jr., Director of Research and Technology at the NASA Glenn Research Center; Dr. Zafra M. Lerman, Head of the Institute for Science Education and Science Communication at Columbia College; Dr. Eloy Rodriguez, James A. Perkins Endowed Professor at Cornell University; Dr. Aziza Baccouche, President and CEO of Aziza Productions; Mr. Carl Mack, Executive Director of NSBE; Bill Curtis, Television Science Commentator; Dr. Sylvester Gates, John S. Toll Professor & Director of Center for String & Particle Theory, University of Maryland at College Park; Dr. Allan Myerson, Dean of the Armour College of Engineering and Science, Illinois Institute of Technology; Mr. Marvin E. Gun, Jr., Manager of the U.S. Department of Energy's Chicago Operation Office; Dr. Maria Curry-Nkansah, Manager of the Hydrogen Business Development Manager for BP Amoco; Mr. Charles Whitmore, NRCS Regional Conservationist; Dr. Herek Clack, Professor of Mechanical Engineering, Illinois Institute of Technology; and Dr. Herman B. White, Research Physicist, Fermi National Accelerator Laboratory.



## Representative Symposia Speakers



Dr. Shirley Malcolm



Capt. Michael Anderson



Dr. A. James Hicks



Hon. Emil Jones



Hon. Luis Gutiérrez



Dr. Rick Kittles



Dr. Hazel Symonette



Mr. Cordell Reed



Dr. Julian M. Earls



Mr. Armstead Ward



Dr. Woodrow Whitlow



Dr. Zafra M. Lerman



Dr. Eloy Rodriguez



Dr. Aziza Baccouche



Mr. Carl Mack



Mr. Bill Curtis



Dr. Herman B. White



Dr. Sylvester Gates



Dr. Herek Clack



Mr. Marvin E. Gun, Jr.

## International Research Abroad Programs



Exposing students to foreign programs or international studies helps them to understand the political, cultural and scientific magnitude of global changes. These relationships can result in improved products, education or technical services. Collaboration with international agencies or institutions can enable faculty and students to participate in solutions to global environmental problems. The overarching theme of this activity is to involve significant numbers of diverse ILSAMP students in research abroad in a manner that impacts the entire community.

The ILSAMP international program began in 2009 when one of our students was selected to participate in the LSAMP Center for International Research. Her summer and fall were spent at the LeLoir Institute, Argentina, where she investigated the dynamic changes in oligodendrocytes induced by oxidative stress and amyloid-beta at the institute. She and another student were also invited to present a poster at the International Workshop on Nanomaterials and Functional Materials at the University of Campinas, Campinas, Brazil, during the summer of that same year. Since the launch of the Research Experiences Abroad initiative, fourteen (14) ILSAMP undergraduates have been selected to participate with their faculty mentors in international research activities. Three (3) students took advantage of a Barbados Summer research experience and two (2) students went to Jamaica. Five (5) students had the opportunity to engage in research on heavy ion collisions in A Large Ion Collider Experiment (ALICE) located at CERN in Geneva, Switzerland and four (4) students conducted research at the University of Johannesburg in South Africa.

Students have noted that the inclusion of an international component in the ILSAMP program broadens the outlook and increases the range of experiences for both them and the international populations they encounter. The students have also remarked that the cultural impact exceeds the research experience. Many students return to the United States with a different perspective on life, a desire to learn an additional language(s) and are more aware of how the world is interconnected.



## Teacher Education

The addition of the Teacher Preparation \$100,000 Supplement during Phase II expanded the original mandate of ILSAMP and paved the way for greater convergence of activities and resources. This initiative opened the door of STEM education to previously untapped pools of



students, increased the number of students served, and increased the number of research opportunities available. The Science Teacher Assistance Center (STAC) was established to assist pre-service, new, as well as established in-service teachers.

The STAC has provided meaningful experiences for STEM majors. A part of the ILSAMP teacher preparation strategy has been to provide pre-service STEM majors with teaching opportunities supervised by certified teachers as well as faculty from the ILSAMP schools of education. These opportunities include instructions and presentations to pre-

college students. With support from STAC, pre-service teachers have attended professional education conferences, attended workshops and in-service programs at local public high schools, received free teaching materials from museums and have taken advantage of educational resources from professional teacher organizations, park conservatories, zoos and park districts. Pre-service teachers have presented their creative works at professional education conferences, at AMP national and ILSAMP local conferences.



In cooperation with the public school's systemic initiatives, ILSAMP developed and distributed a survey to teachers to discover what science teachers needed from a STAC. Responding to the survey results STAC provided practical hands-on experiences, provided disposable materials and developed workshops about safety in the classroom. The STAC maintains materials that can be borrowed for a period of time (CDs, tapes, books), provides hands-on teaching examples and technology and safety workshops. A certified science teacher, an ILSAMP Outreach Coordinator, led the activity to give high school classes science demonstrations, visit schools on career days and judge science fairs.

More recently, ILSAMP institutions:



- conducted a series of workshops, many funded by the state, to increase the effectiveness of college professors' ability to instruct schoolteachers;

- Assisted public school teachers by conducting Chemistry, Physics and/or Biology Van programs. Teachers are instructed in a structured setting at the university and the Van visits schools to provide resources as teachers conduct experiments or demonstrations for their



classes;

- Many faculty members from ILSAMP institutions volunteer to mentor high achieving secondary students in their laboratories;
- Faculty and staff members volunteer to help students with science fair projects and are willing to act as judges at the school and city science fairs; and,
- ILSAMP students become volunteer mentors to students in local schools. The goals of this program is to encourage minority junior high school students to become actively involved with mathematics, science, and technology; to encourage them to see themselves as potential college students; to expose them to various cultural activities; and to give them assistance with homework or special projects. A tangential but important result is that the ILSAMP students who mentor become better students.

### **ILSAMP Bridge-to-the Doctorate Program**



Five Bridge to the Doctorate programs have been awarded to ILSAMP. The first two cohorts were located at Southern Illinois University at Carbondale (SIUC) and supported twenty-four underrepresented STEM graduate students. Three of these students completed their doctorate by December 2010, one of whom now has a faculty position and nine more are enrolled in doctoral programs. Twenty-three of these students have earned Master's degrees and nine are working in STEM fields.



The third, fourth and fifth cohorts were located at the University of Illinois at Chicago (UIC). Forty-two (42) underrepresented STEM graduate students are supported in the UIC ILSAMP BD program. This program is unique in that several students are dually enrolled in PhD and MD programs. Of the 42 UIC BD students enrolled in Cohorts 3, 4, and 5, 3 have been awarded doctorates and 34 remain in the program; of the 5 who have left, two are enrolled in PhD programs at other institutions (see table below).

ILSAMP Bridge to the Doctorate Program Status	Cohorts					Total
	1 (2004 - 2006)	2 (2005 - 2007)	3 (2006 - 2008)	4 (2007 - 2009)	5 (2008 - 2010)	
Total Ph.D. Students Funded Through the Program	12	12	14	11	17	66
<i>Left Program and Entered Workforce</i>	0	0	1	1	1	3
<i>Joined Workforce After Completing Master's Degree</i>	4	7	1	1	0	13
<i>Left Program with M.S. and Entered Ph.D. Program at Another Institution</i>	2	2	1	1	0	6
<i>Left Program Due to Lack of Academic Progress</i>	1	0	1	0	1	3
<i>Left Ph.D. Program to Pursue a Different Degree</i>	0	0	1	0	0	1
<i>Completing Ph.D. Coursework</i>	0	0	0	0	5	5
<i>Preparing to Complete Preliminary/Qualifying Exams</i>	0	0	1	2	5	8
<i>Completing Dissertation</i>	2	3	8	3	5	21
<i>Completed Ph.D.</i>	3	0	0	3	0	6
Completing the Ph.D. in 2011	1	2	6	0	0	9
Anticipated Completion of the Ph.D. in 2012	1	0	5	8	0	14
Participated in International Presentations/Research	0	0	2	1	2	5

The BD Summer Institute (BDSI) and Peer-Mentoring program at UIC has been particularly successful in facilitating the social integration of ILSAMP BD Fellows into graduate school.

BDSI commences for eight (8) weeks. The students are introduced to doctoral study through coursework and laboratory experiences in their respective STEM programs. Activities also include 2-day retreat problem-solving and biochemistry short-courses and academic and professional development workshops. The BDSI gives Fellows, Faculty, and Administrators the opportunity to communicate more openly and effectively in on and off campus environments. BDSI Retreat attendees include all entering, current, and past UIC BD Fellows, STEM faculty, BD Advisory Committee members, University Administrators, ILSAMP Administrators and special speakers.

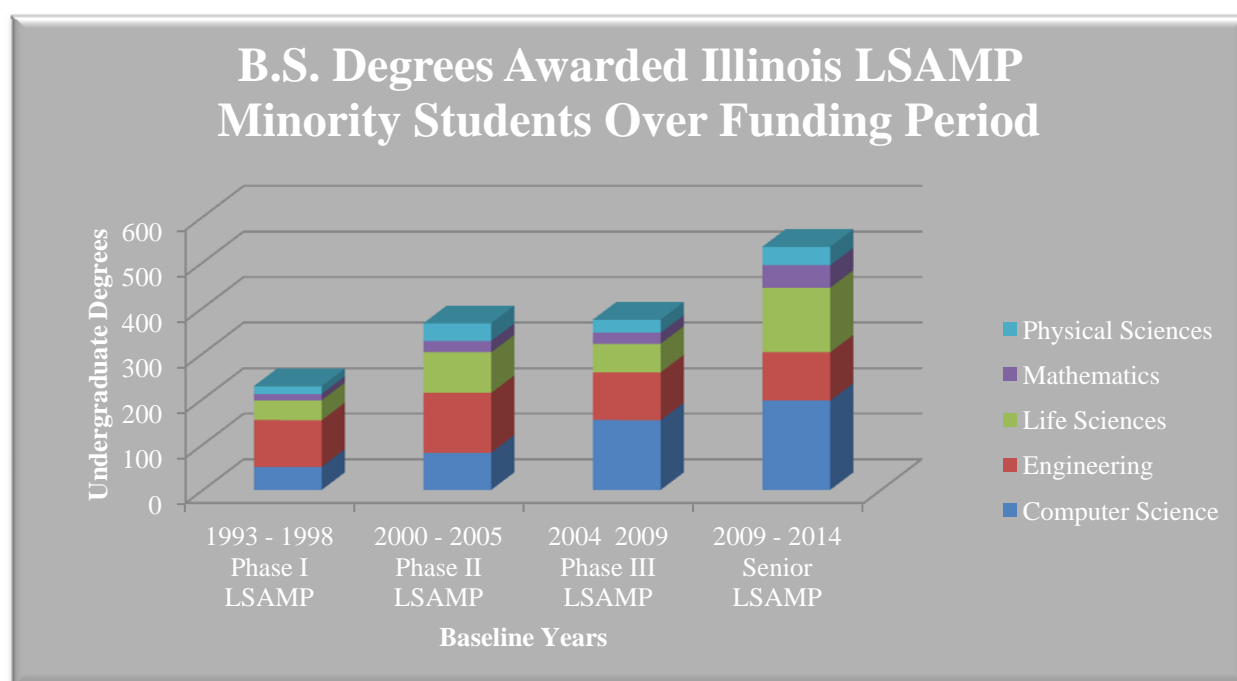
To facilitate the socialization and the campus culture acclimation processes, peer mentors are trained in peer mentorship theory and concepts toward assisting BD program personnel in working toward building a solid support network for all Bridge to the Doctorate Fellows. Fellows who have progressed to their third year of study are chosen as lead peer mentors commencing with the BDSI experience. These Fellows also act as catalysts for change through their participation in BD Program workshops and seminars as panelists and presenters.

By fostering their academic and professional development, we contribute to the increase in URM researchers and faculty members, practitioners in these fields. By developing a campus network of mentors for these students, we also lay the groundwork for supporting future students thereby supporting sustainability.

## ALLIANCE DEGREE AND ENROLLMENT DATA

### Undergraduate Degree Production

ILSAMP efforts to provide meaningful activities to improve underrepresented student success in STEM disciplines have produced dramatic results in terms of the baccalaureate degrees awarded by the Alliance. During the first five-year period of the project, baccalaureate degree awards increased by more than sixty percent (60%). There were 228 STEM degrees awarded at the beginning of the program and 366 at the end of Phase I (see table below). Phase II graduation rates dramatically increased in computer science but did not show an increase in other fields until the Phase III program was initiated. Since ILSAMP was established, the number of baccalaureate degrees awarded to underrepresented minority students has more than doubled.

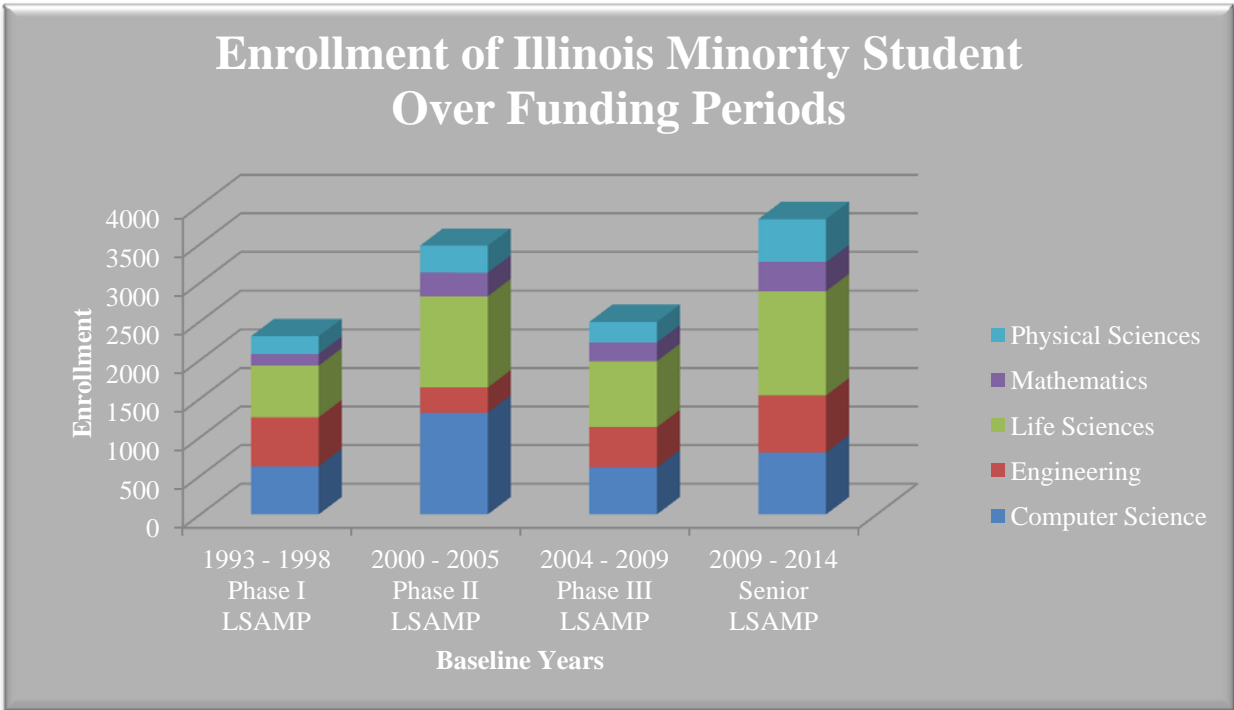


**NOTE:** 1) ILSAMP was not funded during the 1999-2000 academic year, and 2) Phase II Year 5 and Phase III Year 1 overlapped. **SOURCE:** QRC baseline data from WebAmp ([www.qrc.com/amp](http://www.qrc.com/amp)).

### Undergraduate Enrollment Statistics

During the 1990s, the strong economy and low unemployment affected enrollment at institutions in the State of Illinois. As expected, the overall enrollment pattern of adults declined. However, ILSAMP experienced over a *seventy-five percent* increase in minority STEM enrollment during Phase I. This can be attributed to enhanced enrollment through community college transfers and improved retention of STEM students within the Alliance. Impressive gains in enrollment occurred across all funding periods in life sciences from 669 to 1573 and in mathematics from 152 to 386 (see table below). Physical science enrollment also increased from 229 to 619. Other fields experienced enrollment fluctuations, but no substantial changes from 1993 to 2010.





**NOTE:** 1) ILSAMP was not funded during the 1999-2000 academic year, and 2) Phase II Year 5 and Phase III Year 1 overlapped. **SOURCE:** QRC baseline data from WebAmp ([www.qrc.com/amp](http://www.qrc.com/amp)).

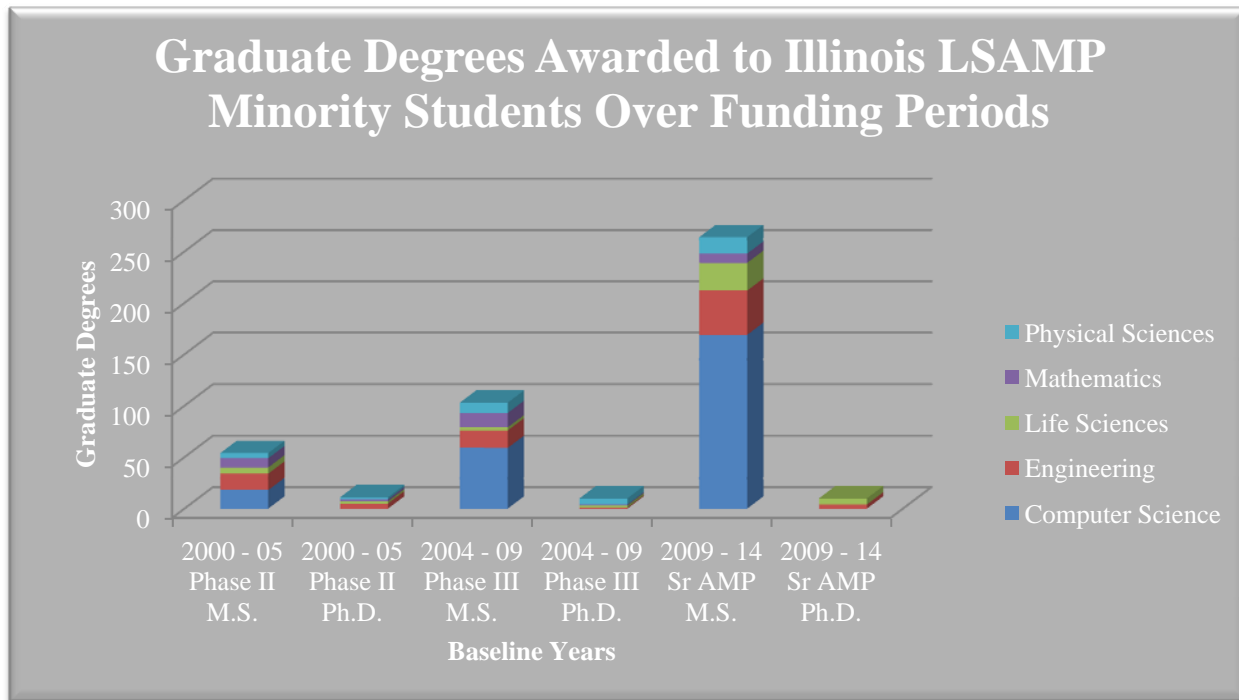
Overall project findings have noted gains in ILSAMP student performance. In general, Alliance partners reported that ILSAMP students who participate in the various activities offered by the program are more apt to complete the baccalaureate degree. Furthermore, ILSAMP students are more aware, than other science majors, of different career options, including graduate school opportunities, and they pursue different options more aggressively.

### Graduate Degree Production

In Phase II, ILSAMP placed emphasis on providing pathways into graduate school in order to increase the number of underrepresented minorities in PhD programs and eventually in the professoriate and STEM industrial workforce (see table below). Indeed, over the ten-year period from 2000-2010, graduate degree attainment quadrupled from 65 to 274. Although our institutions are very different in terms of students' prior preparation and institutional mission, we have demonstrated success through the following: 1) Pre-college and community college bridge programs to ease the transition and provided better academic preparation for freshman and transfer students; 2) faculty and peer mentoring to help retain students in STEM disciplines; 3) supplemental instruction (study groups, tutorials, workshops, study skills training) to strengthen students' ability to succeed in gatekeeper courses; 4) academic year and summer undergraduate



research and internships to prepare and develop students for graduate school; and 5) curriculum revision.



**NOTE:** 1) Phase II Year 5 and Phase III Year 1 overlapped. **SOURCE:** QRC baseline data from WebAmp ([www.qrc.com/amp](http://www.qrc.com/amp)).

ILSAMP institutions have worked together for a number of years and have shared information, adapted “best practices”, and remodeled successful activities for our own campuses. We continue to work together to accomplish goals and objectives; however, because we are aware of specific needs, we each focus attention on implementing activities that produce desired results on our individual campuses. These activities have been shown to produce success in recruiting, retaining, progressing and/or graduating underrepresented minority students. These activities continue to facilitate the progress of minority students through the pipeline. The diversity of our Alliance and the resulting synergy as we work together enhance our collaborative activities and promote our mutual goals.

### **SIGNIFICANT PROJECT HIGHLIGHTS**

- ILSAMP was awarded supplements by the National Science Foundation (NSF) to support the research experiences of Illinois LSAMP participants at Argonne National Laboratory and the Lawrence Berkeley National Laboratory. The participants obtained research experiences as a part of the Faculty and Student Teams (FaST) Program, which is a direct result of the interagency Cooperative Agreement between



DOE and NSF. Since the inception of the agreement, 48 faculty and 117 undergraduate students from Illinois LSAMP have participated in FaST research projects.

- ILSAMP has hosted twelve (12) Annual Illinois LSAMP Student Research Symposia that



were held at various universities and hotel conference centers in the Chicago metropolitan area. On average, two hundred fifty (250) faculty, students and staff from the state of Illinois attended the symposia. The conferences which included workshops, poster and oral presentations, university/college display tables, luncheon and dinner banquets, provided participants an opportunity to come together to share results of research, compare notes, relate experiences, and to develop closer relationships. Speakers with notable STEM backgrounds gave

the keynote addresses at each conference.

- ILSAMP developed several international research opportunities for students. They include collaborations with Lawrence Berkeley National Laboratory and the CERN (European Organization for Nuclear Research) with a focus on experimental high energy nuclear physics; the University of Johannesburg, South Africa, with a focus on chemistry; and the Barbados Coastal Zone Management Unit, Jamaica Center for Disease Control and Prevention, and the Fulbright Academy for Science and Technology with a focus on marine biology.
- An ILSAMP Scholar was one of twenty 2009 LSAMP undergraduates selected to participate in the LSAMP Center for International Research. The student's summer and fall were spent at the LeLoir Institute, Argentina. Two ILSAMP Scholars also presented posters at the International Workshop on Nanomaterials and Functional Materials at the University of Campinas, Campinas, Brazil, during the summer 2009.
- Several partner institutions leveraged its participation in the ILSAMP project to secure additional funding and equipment.

- One extreme source of pride is the fact that the new Chancellor of the Community Colleges of Chicago, Ms. Cheryl Hyman, is a graduate scholar of the ILSAMP program. Pictured here at a 1994 ILSAMP conference, Chancellor Cheryl Hyman is with the Illinois Institute of Technology's ILSAMP Coordinator, Dr. Peter Johnson. Chancellor Hyman graduated from Olive-Harvey College, and holds a Bachelor of Science degree in Computer Science from IIT (where she was an STEM ILSAMP scholar and where she tutored students) and Northwestern



University.

- ILSAMP students have made hundreds of oral and poster research presentations at a number of local, regional, national and international scientific meetings since the inception of the program. They have also contributed to numerous publications in peer-reviewed journals.



- The Alliance successfully secured five bridge-to-the-doctorate (BD) supplements from the NSF. The first two were located at Southern Illinois University at Carbondale (SIUC) and supported twenty-four underrepresented STEM graduate students.



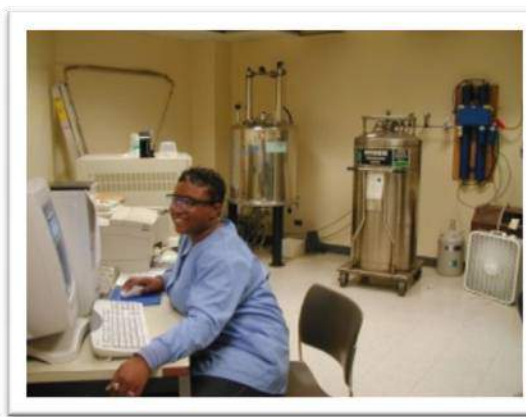
*“The Illinois LS-AMP program gave me the opportunity to extend my knowledge of Mathematics to areas I did not know existed.”*

Celia Jimenez  
St. Augustine College

Three of these students have earned doctorates, nine of these students are Ph.D. candidates of which four are expected to complete their doctorates by summer 2012, and eleven of these students earned M.S. degrees and are gainfully employed in STEM fields. The third, fourth and fifth programs were located at the University of Illinois at Chicago (UIC). Forty-two basic science PhD and MD/PhD underrepresented students are currently supported in the UIC BD program: fourteen (14) students in 2006, eleven (11) students in 2007, fifteen (15) in 2008, and two (2) additional students added to the 2008 cohort during 2009. Three of these students have earned doctorates with several more students expected to complete their doctorates beginning spring 2012.

- With an increasing number of students beginning their academic careers at two-year colleges, strategies were developed that addressed the needs of these students. ILSAMP

developed articulation agreements and collaborative programs with several local community colleges. Community colleges have developed programs in association with the senior colleges with which they are closely affiliated. The purpose of these programs is to increase the number of students transferring to senior colleges in STEM areas. For example: Olive-Harvey College, Kennedy-King College and Harold Washington College have developed programs with Chicago State University; Wilbur Wright College, Malcolm X College (MXC) and Richard Daley College have worked closely with University of Illinois at Chicago; and Harry S Truman College, Saint Augustine College and MXC have developed projects with Northeastern Illinois University. ILSAMP has shown that collaborative efforts can make a difference.





## ECONOMIC IMPACT

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Ultimately funding for ILSAMP activities will come from sources other than the NSF. All participating institutions believe that the ILSAMP goals are worthy and are willing to institutionalize those aspects of the program that prove to be successful. As a result, ILSAMP has been actively pursuing funding from institutional budgets, state, corporations and the institutional foundation offices. The impact of business involvement over the eighteen year period has been phenomenal.

The Kraft Food Company supports a summer pre-engineering program by providing exposure to engineering projects, personnel to work with students and some financial assistance. In addition, the Bank of America, Northern Trust Company, Exelon, Chicago Community Trust, and Commonwealth Edison provide financial assistance in the form of scholarships or internships through the CSU Foundation. Many STEM students benefit from these supports although they are available to students from other majors. Sara Lee Corporation has provided a speaker and food for an ILSAMP conference.

IIT has two industry sponsored programs of note. The Exelon Summer Institute supports a summer bridge program that helps incoming STEM students to build a strong foundation for successful and productive matriculation at the university. The Boeing Scholars Program expands access and opportunities in STEM for High-Achieving High School Students in the Chicago Area. Both programs specifically target underrepresented groups.

At SIUC, partnerships with industry, governmental agencies and businesses that make internships or support include: Caterpillar, Monsanto, US Bureau of Land Management, Illinois Department of Natural Resources, Illinois Geological Survey, Illinois Grape and Wine Industry, local wineries and vineyards, and the Carbondale Park District. ILSAMP students are made aware of these opportunities and encouraged to actively seek internship positions.

The Society of Hispanic Professional Engineers (SHPE) at UIC supports many events for ILSAMP. SHPE-UIC is a non-profit organization whose purpose is to create and develop professional leaders in STEM disciplines. Every month, SHPE-UIC has corporate representatives come and speak to students. Their presentations include opportunities at their company, such as internships, co-ops, and full-time employment. Some of these company representatives are UIC and SHPE alumni. Other companies that provide support for UIC STEM students include GE, Accenture, AT&T, Navy, IDOT, HACU, and Turner Construction.



NEIU has partnered with various public scientific agencies. For example, they have coordinated visits to the USDA National Soil Erosion Research Laboratory, and have hosted the USDA for research workshops and internship workshops. Additionally, they have research collaborations with Argonne National Laboratory, the Field Museum, Lincoln Park Zoo and with Friends of the Chicago River. The partnerships have resulted in internship opportunities for ILSAMP STEM students.



The Community Colleges have also formed relationships with businesses for STEM support. Relationships have been formed with Shimadzu Scientific Instruments. This company has conducted seminars for STEM students. A partnership exists with Eli's Cheesecake Company. Eli's often provide supplies, food, and some resources during special events and graduation. At graduation ceremonies, students are told by speakers from ELI about opportunities in the company. This has benefited the whole student population including STEM students.

### Infrastructure Development

Science education in Illinois got a lot richer with the inception of DePaul University's McGowan Science Building. The \$40 million, four-story, 130,000-square-foot structure is the



McGowan Environmental Science Building at DePaul



Kennedy-King College

centerpiece of a successful \$20 million fundraising campaign that will help to bolster DePaul's vital role in promoting science education in Illinois. Enrollment in DePaul science classes has increased more than 22 percent in the

past eight years, and science majors have increased by 57 percent. The new state-of-the-art facility will allow the university to further its commitment to bring more women and people of color into the field of science than any other university in Illinois.

Kennedy-King college occupied a brand new campus in 2006. The facility is fully equipped with state-of-art classrooms, laboratories and technology.



SIUE School of Engineering

SIUE's School of Engineering building opened in 2000 includes classrooms, laboratories, and offices for Civil Engineering, Computer

Engineering, Computer Science, Construction Engineering, Electrical Engineering, Industrial Engineering, Manufacturing Engineering and Mechanical Engineering.

### State Support

During these eighteen years the Illinois Board of Higher Education (IBHE) has been supportive of projects that enhance the development of underrepresented students. Many of these projects funded under the federal Eisenhower Mathematics and Science Education Program address the needs of underrepresented and disadvantaged students. These projects were designed to improve teaching at the elementary and secondary levels to help students succeed in pre-college mathematics and degree completion in science and math-related fields.

IBHE, under the provisions of the Higher Education Cooperation Act (HECA), annually allocates funds to support programs and projects involving cooperation among higher education institutions. Although HECA grants supports other projects, IBHE encourages the creation of partnerships between colleges and universities to provide curriculum related and economically beneficial experiences for students that increase their motivation to attend and persist in college and attend graduate school or pursue STEM career paths. The Minority Educational Achievement Grants and Minority Articulation Program grants are among the HECA programs.

HECA Grant Awards 2002 through 2008							
Institution	2002	2003	2004	2005	2006	2007	2008
CSU	\$300,000	95,000	245,000	220,000	451,050	114,994	97,137
GSU	402,000	45,000	105,000	135,000	120,900	_____	149,832
ISU	595,000	163,000	168,000	211,000	230,780	322,500	338,419
NEIU	290,000	110,000	85,000	92,000	164,610	828,162	675,741
SIUC	1,258,500	942,000	1,031,000	976,000	369,870	407,128	481,471
SIUE	251,000	60,000	80,000	35,000	23,250	46,100	_____
IIT	3,338,000	3,000,000	3,300,000	895,000	841,850	850,000	_____
UIC	390,000	135,000	_____	105,000	167,400	71,829	274,697
DPU	998,000	83,000	358,000	25,000	_____	100,000	_____
CCC	762,000	678,500	520,000	510,000	339,950	88,700	_____
SAC	58,000	37,700	37,700	37,700	39,585	_____	_____
<b>Total</b>	<b>8,642,500</b>	<b>5,349,200</b>	<b>5,929,700</b>	<b>3,241,700</b>	<b>2,749,245</b>	<b>2,829,413</b>	<b>2,017,297</b>

SOURCE: <http://www.ibhe.state.il.us/Grant Award Search/search.aspx>

In 2002, the Board allocated \$8.6 million to Innovation Grants under the Higher Education Cooperation Act (HECA) for a variety of projects aimed at promoting access and diversity (see the table above). The grants are targeted at increasing minority access to and success in college, to building stronger baccalaureate completion partnerships between community colleges and four-year institutions, and to strengthening data collection and analysis. The level of funds allocated to HECA funding precipitously receded to a low of \$2.0 million as the economy got worse. Even so, the IBHE added \$1 million in 2008 as a new line item specifically for STEM (Science, Technology, Engineering, and Mathematics) diversity initiatives.

Of special note, the State of Illinois helped to support and maintain the ILSAMP program with a HECA grant of \$500,000 in 1999.



## **PROJECT ORGANIZATION, MANAGEMENT AND PERSONNEL**

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### **Central Office Team**

#### **Principal Investigators**



Dr. Delores Cross  
1993-1998



Dr. Elnora Daniel  
1998-2008



Dr. Sandra Westbrooks  
2008-present



**Co-Principal Investigators/Executive Directors**



Dr. Marian Wilson Comer  
*1994-2006*



Dr. LeRoy Jones II  
*2006 - Present*

**Current and Former Office Staff**



Ms. Lezlie Thompson  
*Associate Director*



Mrs. Valerie Booth  
*Business Administrative Assoc.*



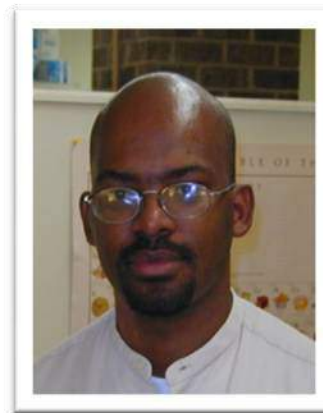
Ms. Fay Edmond  
*Former Office Manager*



Ms. Ronna Sajna  
*Former Office Manager*

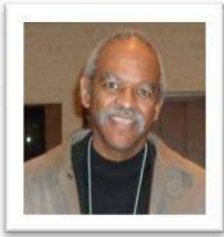


Ms. Yolanda Jordan  
*Former Outreach Coordinator*



Mr. Robert Harris  
*Former Outreach Coordinator*

**Representative Current and Former University Coordinators**



Dr. William Walden  
*UIC*



Dr. Carolyn Narasimhan and Ms. Victoria  
Simek, *DPU*



Mr. Ronald Banks  
*SIUE*



Dr. Sadegh Khazaeli  
*SIUE*



Dr. Peter Johnson  
*IIT*



Ms. Denise Yates  
*UIC*



Dr. Julia Spears  
*SIUC*



Dr. David Rutschman  
*NEIU*



Ms. Pat McNeil  
*SIUC*



Dr. Paul Poskosim  
*NEIU*



Dr. Edwin Cehelnik  
*GSU*



Dr. Anatoly Libgober  
*UIC*



Ms. Beatrice Jamaica  
*UIC*



Dr. Charles Morris  
*ISU*



Dr. Michael  
Mimnaugh, *CSU*



Dr. Karen Lind  
*ISU*



Mr. Florencio Diaz  
*UIC*



Dr. Antonia  
Pagnomente, *UIC*



Dr. Rachel Lindsey  
*CSU*

## Representative Current and Former Community College Coordinators



Dr. Bruno Bondavalli  
*SAC*



Dr. Paula Causher  
*OHC*



Ms. Arlicia Corley  
*KKC*



Ms. Marva Watts  
*MXC*



Ms. Diane Ostojek  
*SSC*



Mr. Austin Ferguson  
*OHC*



Mr. Greg Robinson  
*HTC*



Mr. Abolhasaan  
Taghavy, *RDC*

**Dr. Sandra Westbrook**, as provost of the lead institution, Chicago State University (CSU), is the Principal Investigator (PI). She chairs the ILSAMP Governing Board when they meet and provide "institutional clout" to the program.

**Dr. LeRoy Jones II**, as Co-PI and Project Director of ILSAMP, reports to the PI. He oversees the day-to-day operation of the program and monitors budgetary expenditures.

**Ms. Lezlie Thompson**, as Associate Director of ILSAMP, reports to the Project Director. She assists in the day-to-day operation of the program and provides general oversight of the project coordinators at the partner institutions. She is also responsible for ensuring that the coordinators are in compliance with the goals and objectives of ILSAMP.

**Mr. Robert Harris** and **Ms. Yolanda Jordon** have served as Science Outreach Coordinators for ILSAMP in the past. With the responsibility for dissemination of ILSAMP offerings to perspective STEM students The Outreach Coordinator also coordinates workshops to increase enrollment, retention and graduation rates in the STEM disciplines for ILSAMP students.

**Atty. Michelle Day** is the local evaluator for the ILSAMP program. She has been retained to review and evaluate the progress of the ILSAMP program.

**Mrs. Valerie C. Booth** is the Business Administrative Associate for ILSAMP. She disseminates pertinent information to our internal and external Alliance partners. She interacts daily with ancillary departments within the university in association with the multiple grants administered by our office while maintaining the overall day-to-day operations.

**Dr. Rachel Lindsey**, as Dean of the College of Arts and Sciences, is the Institutional Project Director at CSU. She is responsible for providing leadership to assure that program objectives are accomplished and that communications between various support units are established and maintained. **Dr. Asare Nkansah**, Associate Professor of Chemistry and Physics, **Dr. Rohan Attele**, Chair and Associate Professor of Mathematics and Computer Science, **Dr. Juanita Sharpe**, Chair and Associate Professor of Biological Sciences, and **Ms. Terri Young**, Director of Engineering Studies, are the project coordinators for the STEM departments at CSU. They provide advisement, guidance and oversight for the students within their respective departments.

### **Institutional Coordinators**

The leadership base of ILSAMP is experienced, highly respected, and situated in positions of influence in their respective institutions. Strategically located, the Institutional Project Directors can be instrumental in institutionalizing aspects of the program. **Dr. Rachel Lindsey**, Dean of the College of Arts and Sciences, CSU; **Dr. Carolyn Narasimhan**, Associate Dean of the College of Liberal Arts & Sciences, DPU; **Dr. Willie Hunter**, Managing Director, Center for Mathematics, Science and Technology, ISU; **Dr. Peter Johnson**, Professor of Chemistry and former Dean, IIT; **Dr. Sadegh Khazaeli**, Professor of Analytical Chemistry, SIUE; **Dr. Karen Renzaglia**, Research Professor and Director of McNair Program, SIUC; **Dr. Dhruv Mubayi**, Professor of Mathematics, UIC; **Dr. David Rutschman**, Associate Dean, College of Arts & Science, NEIU; **Dr. Mary Carrington**, Professor, Division of Science, GSU; and **Dr. Bruno Bondavalli**, Dean of Academic Affairs, SAC, are the institutional Project Directors for the program. **Dr. Leonard Etlinger**, Vice President of Research and Development at the City Colleges of Chicago coordinate the Chicago community college component.

**Dr. William Walden**, Special Assistant to the Provost for Diversity, UIC; **Ms. Denise Yates**, Associate Director for Programs, Office of Graduate Diversity Programs, UIC; **Dr. Karen Renzaglia**, Professor of Plant Biology, SIUC; and **Ms. Pat McNeil**, Assistant Dean of the Graduate School, SIUC, coordinate the ILSAMP Bridge-to-the-Doctorate activities.

### **Governing Board**

The Provost/Chief Academic Officer or their designee at each partnering institution comprises the Governing Board of Illinois LSAMP. The Board ensures that the program has the administrative support and visibility that it needs to succeed. The principal investigator (PI), Dr. Sandra Westbrooks, Provost and Senior Academic Vice President for Academic Affairs of Chicago State University (CSU), chairs the Board. All Board members are very supportive of the ILSAMP program. Board members are kept apprised of activities via regular meetings with Institutional Coordinators, mailings concerning various activities; the National Science Foundation (NSF) approved Annual Reports as well as LSAMP publications (e.g., Annual National LSAMP and Bridge to the Doctorate Magazines). They receive invitations to attend Alliance events such as the Annual Illinois LSAMP STEM Research Symposiums.

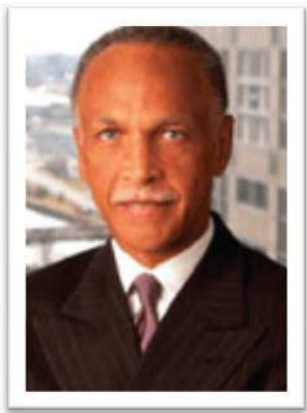
Board members have been key note speakers at Student Research Conferences (Mr. Cordell Reed, Honorable Luis Gutiérrez, Dr. Linda Phaire-Washington, and Honorable Emil Jones), have



run workshops and give remarks at our Coordinator's Meeting during which they pledge their support to the success of the program.

To ensure that the Cooperative Agreement has the administrative support and visibility that it needs to continue to succeed, the presidents or chief academic representative at ILSAMP baccalaureate granting institutions and the community colleges comprise the Governing Board (GB). The GB determines accountability and ensures commitment for long-term institutionalization of successful Alliance activities. The GB makes policy decisions, provides oversight, ensures institutional cooperation, participation, information flow, and ensures program access to pertinent data needed for the continued development of the program. The GB ensures institutional commitment for ILSAMP programs including the creation of infrastructure and management plans to bring about long-term institutionalization of Alliance activities (e.g., mainstreaming retention activities). In addition, the GB aggressively seeks financial and resource support for STEM activities from the Illinois legislature, foundations, and the business and industrial communities for support past the funding period. Dr. Sandra Westbrooks, Provost and Academic Vice President of Chicago State University, the lead institution for this effort, chairs the Board. This board meets as needed.

**Dr. Sandra Westbrooks, Chair**  
*Provost and Senior Vice President for Academic Affairs, Chicago State University*



**Dr. Wayne Watson**  
*President*

**Chicago State University (CSU)** is Chicago's oldest, fully accredited public university. In addition to a broad range of degree programs, the university offers many courses and programs for in-service education. The mission of CSU is to provide a comprehensive education to a diverse population of learners. Founded in 1867 as an experimental teacher training school, the institution has evolved into a full service, multipurpose university committed to meeting the needs of the urban community. It is the largest predominantly minority institution in the Midwest and has a number of ongoing programs to support and retain students in STEM disciplines. CSU is the lead institution in the Illinois LSAMP program.





**Father Dennis H. Holtschneider**  
*President*



**Governors State University (GSU)** is a public university located in University Park, Illinois. Founded in 1969, GSU is an upper-division university, offering undergraduate courses at the junior and senior levels as well as graduate level coursework. The university provides affordable education to its culturally and economically diverse lifelong learners. Through a broad curriculum, flexible teaching strategies and advanced instructional technologies, GSU addresses the needs of both traditional and non-traditional learners. GSU is the only university in Illinois that is designed exclusively for junior, senior and masters level students. All undergraduate students transfer to GSU from community colleges or four-year schools after they obtain 60 credit hours of lower division work.



**Dr. Elaine P. Maimon**  
*President*





**Dr. John L. Anderson**  
*President*

The mission of the **Illinois Institute of Technology (IIT)** is to prepare people for complex professional roles in a changing technological world and to advance knowledge through research and scholarship. It is a private Ph.D. granting university, and one of the 16 institutions that comprise the Association of Independent Technological Universities. IIT is known for offering exceptional preparation for professions that require technological sophistication. Through a committed faculty and close personal attention, IIT provides a challenging academic program designed for the rigors of the real world. IIT has a long track record of working with minority youth in Chicago, attracting them to engineering, and creating a nurturing environment for them to succeed. The university is committed to developing and fostering a climate of inclusiveness, with a diverse faculty, staff, and student body.



**Dr. C. Alvin Bowman**  
*President*

**Illinois State University (ISU)**, founded in 1857, is the oldest public university in Illinois. It is a large public university located in Bloomington-Normal with a traditional commitment to nurturing intellectual activity, providing high quality academic programs and attaining educational excellence. The central mission of ISU is to expand the horizons of knowledge and culture through teaching and research. ISU serves about 20,000 students. In order to achieve its AMP Project objectives, ISU launched an initiative based, in part, on an integrative model of student academic support called Supplemental Instruction (SI). The University College at ISU uses this type of non-remedial support to target high-risk courses and provide assistance on an outreach basis in regularly scheduled, out-of-class study lessons.





**Dr. Sharon K. Hahs**  
*President*

**Northeastern Illinois University** (NEIU) is a comprehensive public state university located in Chicago, Illinois. Founded in 1949, NEIU meets the demand for quality, affordable education serving 12,000 students in the region. The school ranked top both in the most ethnically diverse university and for students with the least amount of debt upon graduation in the Midwest region according to *U.S. News & World Report's* Best Colleges 2011. NEIU is a federally-designated Hispanic Serving Institution. Extension sites serve urban sectors with heavy minority representation. NEIU serves mostly first-generation college students that are tutored through a system of developmental education that utilizes graduate assistants in the appropriate disciplines. NEIU has a strong commitment to innovative, non-traditional education and has been a leader in the development of special programs for adult learners.



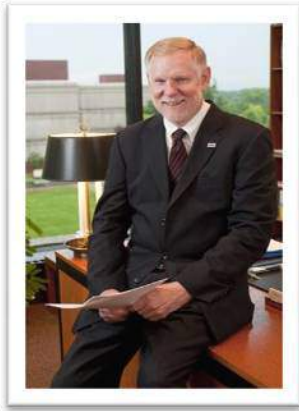
**Southern Illinois University Carbondale** (SIUC) is the flagship campus of the Southern Illinois University system. Located in Carbondale, SIU's undergraduate enrollment is around 23,000. Founded in 1869, SIU is recognized in the *U.S. News & World Report* rankings as a "National University," that is, a university which grants a variety of doctoral degrees and strongly emphasizes research. The University offers the full range of degree programs from the bachelor to the doctoral level, as well as professional degrees in architecture, law and medicine. In keeping with the state's master plan, the University's objective is to provide a comprehensive educational program meeting as many individual students needs as possible. While providing excellent instruction in a broad range of traditional programs, it also helps individual students design special programs when their interests are directed toward more individualized curricula.



**Dr. Rita Cheng**  
*Chancellor*







**Dr. Vaughn Vandergrift**  
*Chancellor*

**Southern Illinois University Edwardsville (SIUE)** is a four-year coed public university located in Edwardsville, Illinois. SIUE was established in 1957 as an extension of Southern Illinois University Carbondale, and is the younger of the two largest institutions of Southern Illinois University. Offering comprehensive programs, services and training to more than 6,000 people annually, the SIUE East St. Louis Center is dedicated to improving the lives of families and individuals in East St. Louis and the surrounding urban communities. SIUE has a solid commitment to the economic development of Southwestern Illinois and the St. Louis metropolitan area. SIUE is one of the best higher education values in the Midwest. SIUE brings commitment to service to an urban population and experience with working with programs that serve a minority population.



**University of Illinois Chicago (UIC)** is the largest university in the Chicago area with approximately 27,000 students enrolled in 15 colleges. It is among a select group of 88 top institutions nationwide that is classified by the Carnegie Foundation as a Research I university. UIC operates the nation's largest medical school, with research expenditures exceeding 340 million and is consistently in the top 50 U.S. institutions for research expenditures. In the 2011 *U.S. News & World Report's* ranking of colleges and universities, UIC ranked as the 72<sup>nd</sup> best public university, and 17<sup>th</sup> most ethnically diverse university in the United States. It is ideally positioned to undertake educational programs aimed at improving the scientific and technical literacy of all sectors of society. Moreover, the university is committed to providing an educational environment that promotes success for African-American and Latin-American students so as to enhance minority recruitment and retention.



**Dr. Paula Allen-Meares**  
*Chancellor*





**Ms. Cheryl L. Hyman**  
*Chancellor*

Through seven institutions, the **City Colleges of Chicago** (CCC) delivers exceptional learning opportunities and educational services for diverse student populations in Chicago. Enhancing knowledge, understanding, skills, collaboration, community service and life-long learning CCC provides a broad range of quality, affordable courses, programs, and services to prepare students for success in a technologically advanced and increasingly interdependent global society. CCC works to eliminate barriers to employment and to address and overcome inequality of access and graduation in higher education. Several of the City Colleges of Chicago are partners with the ILSAMP. The ILSAMP baccalaureate degree granting institutions have developed programs in association with the City Colleges of Chicago with which they are closely affiliated. The purpose of these programs is to increase the number of students transferring to and graduating from senior colleges in STEM areas.



### **Technical Advisory Committee**

The Technical Advisory Committee (TAC) group is composed of representatives from the business community, education leaders and officials, state and national political leaders, and science leaders. The TAC assists the principal investigator and executive director in determining the effectiveness of various components of the ILSAMP program in achieving the targeted goal of graduating more underrepresented minorities in STEM degree programs from Illinois colleges and universities, sending them to graduate school and preparing them for professional career positions. TAC makes recommendations on issues pertaining to assessment, education priorities, current workplace issues, marketing, internships, and legislative issues relating to science education. It also assists in obtaining funds and other resources from local agencies, foundations, industrial and business enterprises. Chaired by Dr. Marian Wilson Comer, former co-PI and Executive Director of ILSAMP, the committee makes recommendations on those activities which should be modified, expanded, or eliminated and assists in identifying how government, business, and universities might be more deliberate and coherent in support of program goals. In addition, the Committee facilitates representation and participation of underrepresented



*“The AMP program has allowed me to embark on a new journey through the evolving world of computer science and has afforded me the opportunity to focus entirely on my studies. Moreover, I have been able to establish new, profound, and lasting relationships among my colleagues and faculty.”*

**Anthony Carlos**  
Governors State University

minorities in the enormous range of STEM activities in metropolitan Chicago and the state of Illinois. This committee meets at least once per year.

<p><b>Dr. Marian Wilson Comer, Chair</b>  <i>Executive Director Emerita of the Illinois LSAMP Program &amp; Professor Emerita of Biology  Chicago State University</i></p>	
<p><b>Ms. Gail Bahar</b>  <i>Vice President, Human Resources  Seaway National Bank</i></p>	<p><b>Dr. Barbara Henley</b>  <i>Vice Chancellor for Student Affairs  University of Illinois – Chicago</i></p>
<p><b>Dr. Phillip Wagreich</b>  <i>Director, Institution for Math  &amp; Science Education  University of Illinois - Chicago</i></p>	<p><b>Dr. Zafra Lerman</b>  <i>Head, Institute for Science Education  &amp; Science Communication  Columbia College – Chicago</i></p>
<p><b>Representative Danny K. Davis</b>  <i>United States House of Representatives  7<sup>th</sup> Congressional District – Illinois</i></p>	<p><b>Dr. Linda Phaire-Washington</b>  <i>Associate Provost for Research &amp; Sponsored  Programs, Alabama State University</i></p>
<p><b>Senator Richard J. Durbin</b>  <i>United States Senate  Illinois</i></p>	<p><b>Ms. Patricia Pierre-Auguste</b>  <i>Allstate Exclusive Agency Owner  Allstate Insurance</i></p>
<p><b>Dr. Leonard Etlinger</b>  <i>District Director of Grants &amp; Contracts  City Colleges of Chicago</i></p>	<p><b>Mr. Cordell Reed</b>  <i>Chairman of the Board  Chicago State University Foundation</i></p>
<p><b>Mr. Robert T. Harris</b>  <i>Program Analyst  Blue Cross Blue Shield of Illinois</i></p>	<p><b>Dr. Dorothy S. Strong</b>  <i>Director, BiMathematics Project  Education Support Group</i></p>



## ALLIANCE INSTITUTIONS

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### **Chicago State University (Lead Institution)**

9501 S. King Drive - SCI 101A  
Chicago, IL 60628  
773.995.3296 (office)  
773.995.2966 (fax)  
ilsamp@csu.edu

### **Southern Illinois Univ-Edwardsville**

Dr. Sadegh Khazaeli  
618.650.3561/skhazae@siue.edu

### **University of Illinois-Chicago**

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312.313.2138/mubayi@math.uic.edu

### **DePaul University**

Dr. Carolyn Narasimhan  
773.325.1854/ cnarasimhan@depaul.edu

### **Governors State University**

Dr. Mary Carrington  
708.534.4532/ M-Carrington@govst.edu

### **Illinois Institute of Technology**

Dr. Eric Brey  
312.567.3440/brey@iit.edu

### **Illinois State University**

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### **Northeastern Illinois University**

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### **Southern Illinois University-Carbondale**

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618.453.3229/renzaglia@cos.siu.edu

### **Kennedy-King College**

Ms. Arlicia Corley  
312.602.5209/acorley@ccc.edu

### **Olive-Harvey College**

Mr. Austin Ferguson  
773.291.6498/aferguson@ccc.edu

### **St. Augustine College**

Dr. Bruno Bondavalli/773.878.3439  
Bondavalli@staugustine.edu

### **Harry Truman College**

Dr. Denise Leonard  
773.907.4660/dleonard8@ccc.edu

### **Wilbur Wright College**

Dr. Benito Kalaw  
773.489.8380/ bkalaw@ccc.edu

### **Argonne National Laboratory**

Dr. Andrew F. Skipor  
630.252.1751/askipor@dep.anl.gov







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FROM THE NATIONAL SCIENCE FOUNDATION  
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*The Illinois Louis Stokes Alliance for Minority Participation gratefully acknowledges the support of the NSF*

## the national science foundation

**Dr. Subra Suresh**  
Director  
OFFICE OF THE DIRECTOR

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