



The partners of the National Science Foundation, Kentucky – West Virginia Louis Stokes Alliance for Minority Participation (LSAMP) has a goal of creating diverse campus environments and increasing underrepresented group Science, Technology, Engineering, and Mathematics (STEM) baccalaureate degree production. The approach incorporates six identified characteristics of successful programs in a manner tailored for the Alliance institutions and the two states. The focus areas for our approach are:

- Recruitment and retention
- Research experiences
- Transitional experiences
- Campus Climate
- Curriculum reform
- Postgraduate career aspirations
- Role models

Alliance-wide activities include transitional bridge programs, research opportunities for undergraduate students, an annual student research symposium, and workshops on such topics as the benefits of graduate school, preparation for graduate school, research career options, incorporating diversity into the curriculum, mentoring, and recruitment and retention of minority STEM faculty.

The academic value of the KY-WV LSAMP effort is the increased knowledge base related to teaching and learning practices for STEM disciplines, the knowledge base regarding practices for improved retention of students, and the development of improved curriculum materials and practices for STEM disciplines.

This action provides the partner states an increase in a skilled workforce and has the potential to significantly motivate the competitive position of the two states relative to what is currently available within today's learning levels, and in doing so, attract new jobs to the community, which often broadens the financial base. Each institution has a unique mission and character, and serves a distinct population.



- The National Science Foundation, Experimental Program to Stimulate Competitive Research (EPSCoR), Kentucky - EPSCoR, and the West Virginia - EPSCoR programs in are strong, state-wide programs that serve all of the higher education institutions within each state. They share common goals with the KY-WV LSAMP regarding diversity, and are required to report diversity activities and results to the NSF EPSCoR office annually. The KY-WV Alliance will leverage much of the communication and administrative activities by using the well-established state EPSCoR offices, and the shared goals of creating more opportunities for underrepresented Science, Technology, Engineering, and Mathematics students. The EPSCoR offices in both states are providing funds to support undergraduate research experiences for 16 LSAMP students. The Directors of the two EPSCoR programs are John Connolly for Kentucky Email: connolly@ukcc.uky.edu Tel:859/257-8316, and Paul Hill for West Virginia. Email: hill@wvepscor.org Tel:304/558.4128 x287



- **Bluegrass Community & Technical College, Lexington, KY** - A six-campus college, located in Lexington serves six counties in the surrounding area. Five of the six counties, Anderson, Boyle, Casey, Clark, and Montgomery, are primarily rural with Fayette County being urban, and the largest county in the region. Bluegrass Community & Technical College (BGCTC) will be one of the lead institutions in the area of recruitment and retention, transitional experiences, and issues of campus climate. The greatest strength of BCTC is a highly developed program of activities and supports that promote students' integration into the life of the community college. By reducing feelings of isolation, underrepresented group students are more likely to be retained, successful, and matriculate to a four-year institution. Some of these activities include the development of a

Transfer Center, which will both advise and monitor students, access to Underrepresented Group (UG) students through the Talent Search and Upward Bound Programs. The Office of Multiculturalism and Inclusion and a Mentoring Program focusing on African American and Latino male students, a strong Counseling program, and a faculty, staff, and administration committed to the well being of ALL students. BCTC will play a key role in developing more strategies that are effective for students transitioning from community colleges to 4-year institutions. The Transfer Center will increase the number of written articulation agreements between BCTC and four-year institutions, provide improved advising services, establish a peer-mentoring program, and develop a system to track students who transfer to other institutions. This is critical to enhancing the pipeline of potential students for the Alliance. **Landrea Miriti, Associate Professor of Mathematics and Charlene Walker VP of Multiculturalism and Inclusion will serve as Co-campus Coordinators Tel: 859/246-6425 (email address Charlene.walker@kctcs.edu)**

CENTRE

- **Centre College, Danville, KY** – Founded in 1819, it is considered the flagship private college in Kentucky and is consistently ranked among the top 50 national liberal arts colleges. Located in the "centre" of Kentucky in Danville - Centre College is a selective liberal arts college with an enrollment of 1,100 students. Centre College is committed to providing a learning experience that reflects students' individual interests and abilities. The Centre Commitment guarantees students who meet the College's academic and service expectations an internship, study abroad, and graduation in four years. Centre guarantees that if a student meets the College's academic expectations and is unable to secure the components of the Centre Commitment within four consecutive years of enrollment, the College will provide up to an additional year of study tuition-free. Centre will take an active role in developing best practices for recruitment and retention efforts based on their institutional analysis. Advancing the diversity of the student population is a major institutional goal. **Campus Coordinator J. Preston Miles, Ph.D., Email: miles@centre.edu Tel: 859/238-5414**



- **Kentucky State University, Frankfort, KY** – Kentucky State University (KSU), founded in 1886, is the only historically black college or university (HBCU) in Kentucky, Located in central Kentucky's historic Capital. KSU is the most diverse university in the Kentucky system of higher education concerning both students and faculty. KSU's mission focuses on liberal studies programming that promotes the values and methods of interdisciplinary, multicultural, and global education. Planned activities for KSU include recruitment and retention components targeting students and parents at the middle- and high- school levels, summer bridge programs for incoming freshman, and undergraduate research opportunities. KSU will be one of the institutions active in the best-practice efforts in the areas of research experiences, role model development, and retention, and issues of climate. **T.S. Kochhar, the Campus Coordinator for KSU Email: tkochhar@qgmail.kysu.edu Tel: 502/597-6070**



- **University of Kentucky, Lexington, KY** – Located in central Lexington, and is the flagship public institution of the state, promoting human and economic development that improves lives within Kentucky's borders and beyond. The University's strategic goals include the attraction and graduation of outstanding students, and the cultivation of diversity of thought, culture, gender, and

ethnicity, which are reflective of key components of the LSAMP program. The University of Kentucky's (UK) role is to serve as the LSAMP Central office, and will assist with the coordination and dissemination efforts among the ten partner institutions, as well as sponsor Alliance activities such as workshops and seminars that address these focus areas. Additionally, the UK-LSAMP program will address the recruitment and retention, research experiences, issues of climate, curriculum reform, postgraduate career aspirations, and role model focus areas. The research experiences component will provide for a \$3000 stipend for 10 summer students. Student participants will also receive \$500 for research related supplies and a \$300 travel budget for trips to visit local companies and national research facilities. Graduate students recruited through program efforts will serve as role models for the undergraduate students, and potential faculty. UK LSAMP will be active in the best practice workgroups for research experiences, postgraduate career aspirations, and role model focus areas. The LSAMP Faculty Advisory Committee will examine curriculum issues for key STEM courses at the freshman and sophomore levels, and make appropriate recommendations for improvement. In regards to postgraduate career applications, UK will utilize the developed relationships with student organizations to target potential graduate students for the campus, and apply for admission to the National GEM Consortium. Central administration of the LSAMP project will reside at UK and the institution also houses and centrally administers the state's KY NSF EPSCoR office. Campus Coordinator for UK LSAMP efforts will be **Dr. Ingrid St. Omer, Co-PI of the KY-WV LSAMP, and Assistant Professor of Electrical & Computer Engineering** Email: istomer@enr.uky.edu Tel: 859/257-6143.



- **University of Louisville, Louisville, KY** - The mission of the University of Louisville (UofL) is to be a premier, nationally-recognized metropolitan research university with a commitment to advance the intellectual, social, and economic development of a diverse community and its citizens. UofL serves as Kentucky's urban/metropolitan university and is located in Louisville. UofL invests its efforts in recruitment, retention, and undergraduate research. For recruitment, efforts it concentrates on sources that have the highest potential to provide motivated students in the STEM areas. Additionally at the Community College level, UofL will utilize the "Pathways to Success Program" to recruit. This is a partnership program between UofL and Jefferson Community College (JCC). A partnership designed for students who enroll at JCC and want to complete a four-year degree at the UofL. UofL-LSAMP will support "C.O.N.E.C.T.", a peer mentor program that assists 1st year African American students with their transition from high school to college and "REACH" (Resources for Academic Achievement) which is a centralized academic support unit for undergraduates that helps students to connect to UofL, adapt to college life, succeed in the classroom and progress toward graduation. The UofL-LSAMP will be committed to involving the LSAMP scholars in mentored undergraduate research. The remainder of the LSAMP funds will be dedicated to involving the LSAMP scholars in mentored undergraduate research. The summer research program, which will have a stipend of \$3000 for the 10-week period and provide \$500 for supplies and expenses required for conducting the research and the poster preparation. UofL will take an active role in the focus areas of recruitment and retention, and undergraduate research experiences. **Pam Feldhoff, Associate Professor of Biochemistry/Molecular Biology and Assistant Vice President for Research, will serve as the campus coordinator for UofL** Email: pamela.feldhoff@louisville.edu Tel: address, phone #).



- **Western Kentucky University, Bowling Green, KY** - Western Kentucky University (WKU) is a state-supported comprehensive public university with three extended campuses. Western primarily serves students from the south-central region of Kentucky and offers rigorous academic programs in the liberal arts and sciences. The Ogden College of Science and Engineering, where most STEM programs reside, prides itself in providing numerous opportunities for students to become engaged in hands-on applied research projects that serve constituents while helping students make the transition from the classroom to the workplace or graduate/professional educational programs. The Ogden College of Science and Engineering has recently hired staff

adept in diversity issues to focus efforts proactively on issues related to underrepresented/underserved student recruitment, retention, and graduation. WKU is currently preparing a booklet that will guide freshmen to college and departmental services that will help students make the transition from high school to college successful. In addition, WKU will personally contact students with a science undeclared major and help them find a suitable faculty advisor to guide them through a curriculum and career choices. Consistent with LSAMP goals, WKU has initiated a number of programs to improve recruitment, retention, and graduation of underrepresented group students. A full-time Admissions Coordinator has been hired to assist these recruitment initiatives, increase funds for scholarships, develop programs for students transitioning from high school to college, provide more diversity and cultural workshops for incoming freshmen, and co-sponsor student forums to address diversity in the campus community. The Ogden College hosts the Applied Research and Technology Program (ARTP) at WKU, which engages students in interdisciplinary applied research and technology projects. Student research participants will receive a stipend for participation in the ARTP program. WKU will be active in the focus area workgroups on climate issues and curriculum reform. **Charles McGruder, Professor of Physics & Astronomy, will serve as the WKU Campus Coordinator Tel: 270/745-5277 (email address).**



- **Marshall University, Huntington, WV** – Marshall is named after the nation’s first Chief Justice. Marshall is a research-intensive regional comprehensive university with a mission in rural education and health. Marshall serves a mixed urban and rural population MU has identified two institutional goals. The first is to increase underrepresented group STEM enrollment. The second goal is strengthen retention and reduce time to graduation. MU has developed targeted outreach and recruiting that focus on providing appropriate role modes such as several newly hired scientists, engineers, and mathematicians sensitive to the issues concerning underrepresented group students. Marshall will also address issues of climate with block scheduling and learning communities. A comprehensive STEM summer bridge program is also planned during freshmen orientation. Undergraduate research activities also feature prominently in the proposed MU LSAMP program. **Joseph Bragin, Professor of Chemistry, will be the Campus Coordinator for Marshall Email: bragin@marshall.edu Tel: 304/696-3167.**



- **West Virginia State Community & Technical College, Institute, WV** – West Virginia State Community and Technical College (WVSCTC) is recognized as an independent 2 year accredited institution that is administratively – linked to West Virginia State University (WVSU).WVSCTC is co-located on the same campus of West Virginia State University. The mission of WVSCTC is to provide comprehensive higher education and workforce training programs and services of superior quality that are financially and geographically accessible and that meet the individual, business, and community needs of our service areas. WVSCTC offers STEM discipline programs in Applied Meteorology, Applied Process Technology, Computer Science, General technology, Power Plant Technology, and Technical Studies with General and Information Technology options. WVSCTC and WVSU have planned joint LSAMP activities that focus on recruitment and retention, and bridge transitions.



- West Virginia State University, Institute, WV**, - West Virginia State University (WVSU) is a public, land-grant, Historically Black College & University (HBCU), founded in 1891 which has evolved into a fully accessible, ethnically/culturally integrated, and multigenerational institution. The University has a mission of meeting the higher education and economic development needs of the state and region through innovative teaching and applied research. WVSU offers encouragement and education through flexible course offerings in traditional classrooms, in non-traditional educational settings, and through distance learning technologies. WVSU has found that a supportive and peer-interactive classroom climate plays an important role in student success. As co-located institutions, **WVSCTC** and **WVSU** have planned joint LSAMP activities that focus on recruitment and retention, and bridge transitions. The bridge program, Summer Math and Science Enrichment Program (MASEP), will focus on Mathematics, Computer Science, Biology, and Chemistry. MASEP will target incoming freshmen in these areas of study. The program will offer six-week introductory and preparatory courses in STEM that will allow the students to excel during their four-year degree. To further address the challenge of retaining and graduating students in the STEM disciplines, WVSU will initiate the EXCEL Program. The EXCEL program is a small group of peer mentors. The program will use LSAMP funds to engage STEM mentors that will be paired up with STEM students. These mentors will have accountability for meeting with STEM students for two to three hours per week. The mentors will serve as coaches for the STEM students and work with a group of not more than five students. Both of these institutions will take an active role in the recruitment and retention, and transitional experiences best practices Campus. **Coordinator for these joint efforts is Joseph Kusimo (email address, phone #).**



- West Virginia University, Morgantown, WV**. - West Virginia University (WVU) is the state's only comprehensive research and health sciences doctoral degree-granting land-grant institution. A wide range of health science programs are taught through the schools of medicine, dentistry, nursing, and pharmacy, including allied health programs and graduate programs in the basic sciences. To increase the quality and quantity of minority students in STEM degree programs, WVU will expand existing programs that support student recruitment and retention, by creating a STEM Alliance content focused program based on the Triesman model – developing learning communities through engagement in challenging problems with support from both peer and faculty mentors. WVU proposes a Mathematics Summer Bridge program from high school to college and an Integrated STEM Summer Bridge program from the freshmen to the sophomore year. The Institute for Mathematics Learning (IML) in the Department of Mathematics at WVU has been restructuring freshmen level mathematics courses based on the Triesman model for the past four years. The IML engages students in computer laboratories where they explore concepts and model real world problems. LSAMP would allow the creation of a cohort of minority students who would work with peer and faculty members in the IML Computer Center on challenging mathematical problems. The cohort would receive supplemental instruction, an additional class meeting each week, which focuses on building skills and conceptual understanding. The focus would be on mastery of pre-calculus and calculus concepts and skills throughout both the first summer and first academic year. In the second summer and sophomore academic year the cohort will engage in interdisciplinary projects where mathematics is applied in other fields, such as chemistry, physics, or the forensic science program at WVU. The STEM Alliance will extend the Summer Advancement Program to engage the cohort in undergraduate STEM research in the junior and senior years. To spread community and enhance recruiting of minorities into future cohorts, the cohort will engage in community service such as mentoring middle school or high school minority students in mathematics and science. This outreach will not be only for local schools, but will involve computer-mediated distance mentoring through two-way audio and video course software. WVU will take an active role in best-practice development for the campus climate and curriculum reform areas. **Campus site coordinator will be Robert Mayes, Director of the Institute for Mathematics Learning Email: rmayes@math.wvu.edu Tel: 304/293.2011ext2304.**

Visit the KY-WV AMP Website
<http://kywvamp.uky.edu>
 Contact us at

Tel: 1(800) XXXXXX

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We Can!



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The One Who Cares The Most- Wins!
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