**Table of Contents**

Project Summary: The Ohio LSAMP Alliance ................................................................. 2  
Personnel and Organization of The Ohio LSAMP Alliance ........................................ 4  
LSAMP Scholar Eligibility ............................................................................................. 8  
Recruitment, Selection, and Enrollment of LSAMP Scholars ..................................... 13  
The LSAMP Model ....................................................................................................... 16  
Scope of Work ............................................................................................................... 17  
Required LSAMP Programming ................................................................................. 17  
Participant Support Costs ............................................................................................. 18  
Non-participant Support Costs ...................................................................................... 19  
Invoices and Subawards ............................................................................................... 20  
Data Collection and Entry ............................................................................................ 22  
Task Force Descriptions ............................................................................................... 30  
Appendices .................................................................................................................... 38

I. Supplemental Invoice Form ....................................................................................... 39  
II. Enrollment Form ....................................................................................................... 41
Project Summary: The Ohio LSAMP Alliance

The Ohio LSAMP Alliance will be a new alliance among 7 four-year institutions (Central State University, the University of Cincinnati, Cleveland State University, Miami University, The Ohio State University, Wilberforce University, and Wright State University) and 4 community colleges (Cincinnati State Technical and Community College, Columbus State Community College, Cuyahoga Community College, and Sinclair Community College). In addition, the Alliance will work collaboratively with community partners, an Industry Advisory Board, and other NSF-supported programs. The purpose of this alliance is to significantly increase underrepresented minority student recruitment, retention, persistence, and attainment of science, technology, engineering, and mathematics (STEM) degrees. The goal of the program is to double the number of underrepresented minority baccalaureate degrees in STEM disciplines at partner institutions within five years.

The following are the objectives of the Ohio LSAMP Alliance: 1) to foster a partnership among alliance institutions, working with industry and community partners, that results in programming that is collaborative, effective, and sustainable; 2) to heighten the awareness of opportunities in STEM disciplines and increase the recruitment of underrepresented minority students to STEM majors at partner institutions; 3) to provide early and sustained programs to facilitate the critical transition from high school to college at each partner institution; 4) to increase the retention of first- and second-year underrepresented minority students in STEM disciplines; 5) to improve the disciplinary socialization of underrepresented minority students in STEM disciplines, particularly by providing undergraduate research opportunities through the baccalaureate; and 6) to provide pathways for smooth transitions from community colleges to four-year institutions.

Intellectual Merit

There is an identified need in Ohio for programs to improve retention of underrepresented college students, primarily from the first to the second year of college. The Ohio LSAMP Alliance will work collaboratively with industry and community partners to institutionalize effective recruitment and retention programs. Driven by the objectives, programming includes the following alliance-wide activities: articulation agreements and credit transfers, Ohio LSAMP Alliance Conference, innovative curricular reforms in mathematics, interactive web site, sharing of online courses, cyber-enabled sharing of workshops, diversity sensitivity training, collaborative faculty mentoring, and production of Ohio LSAMP Alliance brochures, programs, and other materials. In addition, each institution will provide programming that includes advisement and counseling, residential summer bridge and early arrival programs, undergraduate research internships with stipends, faculty and peer mentoring, and tutoring or supplemental instruction.

The Ohio LSAMP Alliance will be housed in the Office of Diversity and Inclusion (ODI) at The Ohio State University, where Dr. Valerie Lee, Vice Provost and Chief Diversity Officer, directs a staff of eighty-eight individuals, who will assist with LSAMP programming and activities. President Joseph Alutto will lead the Governing Board,
formed by the provosts of the participating institutions. The Steering Committee will provide intellectual leadership for STEM-related activities and will include representatives from each partner institution. The evaluation team will implement a comprehensive qualitative and quantitative evaluation and monitoring system to assess the quality of individual program components for internal refinement and external application and to measure the impact of Alliance activities on retention and degree completion.

**Broader Impacts**

The Ohio LSAMP Alliance will significantly enhance the STEM infrastructure within Ohio and will serve as a catalyst for change, innovation, and resource enhancement throughout the state. Underrepresented minority students will learn from faculty and peer mentors within Alliance partners, produce research, and participate in scientific conferences. Alliance partners will share resources through cyber-enabled activities, including online courses, interactive web site, and videoconferencing. Institutions of higher education, community partners, and industry will work collaboratively to determine best practices and share resources, avoiding duplication of efforts. Data evaluation will contribute to evidence-based best practices in STEM education for student recruitment, retention, persistence, and attainment of STEM degrees. The Ohio LSAMP Alliance will serve as a national model, distributing best practices through participation in national conferences, higher education media networks, and through a well-developed web site.
Personnel and Organization of The Ohio LSAMP Alliance

Principal Investigator

The Ohio State University is the lead institution. President Michael Drake serves as the principal investigator and chair of the Ohio LSAMP Alliance Governing Board. He provides intellectual leadership and general oversight to the entire project. As chief executive officer, he oversees Ohio State’s six campuses, 64,000 students, and nearly 40,000 faculty and staff.

Governing Board

The provosts of the participating institutions, together with representatives from partner organizations, form the Governing Board, which provide leadership to their institutional personnel to ensure that appropriate infrastructures and support mechanisms are in place. They provide overall governance for the Alliance, exercising ultimate control over its program directions. They assist in broadening the base of support for Alliance objectives among academic, industrial, governmental, and community partners and assure the commitment of resources where required. The Governing Board members include: Dr. Charles Ford, Jr. (Central State University), Dr. Beverly Davenport (University of Cincinnati), Dr. O’Dell M. Owens (Cincinnati State Technical and Community College), Dr. Deirdre Mageean (Cleveland State University), Dr. David Harrison (Columbus State Community College), Dr. Craig Fulton (Cuyahoga Community College), Dr. Raymond GOrman (Miami University), Dr. Joseph Steinmetz (The Ohio State University), Dr. David Collins (Sinclair Community College), Dr. Algeania Warren Freeman (Wilberforce University) and Dr. S. Narayanan (Wright State University).

Steering Committee

The Steering Committee is appointed by the provosts and oversees and provides intellectual leadership for the STEM-related activities of the Alliance. It recommends policy, establishes priorities, reviews and evaluates ongoing programs, and fosters new initiatives. It reports to the Governing Board and meets at least twice a year. The Alliance Director chairs the Steering Committee and reports directly to the Governing Board. The Steering Committee members are from the eleven institutions of higher education: Central State University (Krishna Kumar Neunuri, Subramania Sritharan), University of Cincinnati (Kenneth Simonson, Jeffrey Johnson), Cincinnati State Technical and Community College (Kim McMillan, Douglas Bowling), Cleveland State University (Susan Carver, John Holcomb), Columbus State Community College (Lisa Schneider, Maia Randle), Cuyahoga Community College (Lam Wong, Geza Varhegyi), Miami University (Christopher Makaroff, James Kiper), The Ohio State University (Christopher Andersen, David Tomasko), Sinclair Community College (Larraine Kapka, Anthon Ponder), Wilberforce University (Freddie Jordan, Emeka Morah), and Wright State University (Ruby Mawasha, Nathan Klingbeil). The Steering Committee also meets through conference calls. In addition, the Alliance Director, along with members
of task forces and the evaluation team, visit members of the Steering Committee at their institutions every year.

**Alliance Administration**

**Office of Diversity and Inclusion**

The Ohio LSAMP Alliance is housed in the Office of Diversity and Inclusion (ODI) at The Ohio State University, where Vice Provost Sharon Davies heads up a staff of eighty-eight dedicated individuals, who provide programs for the recruitment and retention of underrepresented minority students and will assist with LSAMP programming and activities.

The offices at ODI include: ODI Scholar Program (ODISP), Community Outreach and Engagement, the Todd A. Bell National Resource Center on the African American Male, the Frank W. Hale, Jr. Black Cultural Center, Latino and Latin American Space for Enrichment and Research (LASER), Access Collaborative Program, Leadership Initiatives for Women of Color, Special Programs, the Office for Disability Services, the Kirwan Institute for the Study of Race and Ethnicity, the Collaborative Diversity Initiative (diversity representatives appointed by academic units who work on issues of diversity), and pre-collegiate pipeline programs, including the Young Scholars Program, Upward Bound, and OSU Bound. Yolanda Zepeda, Assistant Provost at ODI, coordinates the efforts of the ODI offices in LSAMP programming. ODISP, under the leadership of Shannon Gonzales-Miller, provides the following services: holistic retention counseling, tutoring, mentoring, bridge and early arrival programs, as well as academic and social support to low-income minority single parent students.

**Alliance Director**

Dr. Barbara A. Fink serves as the Alliance Director. She is the Faculty Fellow at ODI, and she will be responsible for the day-to-day administration of the Ohio LSAMP Alliance. She oversees the maintenance of student, program, and financial records; monitors the progress of student participants; convenes the Steering Committee; works with industry and community partners in fundraising and program coordination; assures the maintenance of the Ohio LSAMP web site; and prepares annual reports to the National Science Foundation. She also assures the success of alliance-wide programming, including the annual Ohio LSAMP Alliance Conference, online courses, faculty development workshops, and cyber-enabled workshops in undergraduate research. She travels to partner institutions, as needed, and assures good communication, resource sharing, and sharing of best practices among Alliance partners. She communicates frequently with the evaluation team and make the results of data evaluation known to partner institutions in a timely fashion.

**Program Manager**
J. Tyler Cole is the Program Manager for The Ohio LSAMP Alliance. This is a full-time position responsible for providing administrative support to the Alliance office, including logistical arrangements for the Ohio LSAMP Alliance Conference and the professional development workshops, tracking of students and data gathering, records and financial management, maintaining an inventory of internships and research opportunities, and alliance-wide communication. Tyler has a B.S. in business administration and marketing, with a minor in leadership studies from The Ohio State University. He has a master’s in education in higher education from Ohio University. He has served as admissions advisor for transfer initiatives since 2012 at OU, admissions counselor at Ohio Dominican University, junior counselor for undergraduate admissions at OSU, and in a variety of additional employment experiences involving work with students. He was a member of the Upward Bound College Prep Academy, a recipient of a Morrill Scholarship, and has been involved in a long list of service activities. He started in the position of Program Manager on July 7, 2014.

Campus Teams

Each institution has established a Campus Team, which is responsible for coordinating local Alliance activities and for disseminating information concerning these activities to their respective campus communities. Each Campus Team is responsible for involving and informing academic and administrative units across campus, as well as STEM faculty, in order to carry out LSAMP programming. Membership in the Campus Teams includes representatives from engineering, the sciences, student affairs, admissions, financial aid, and faculty mentors.

Research Faculty Members

Research faculty members have been and will continue to be actively involved in program planning, selection of student participants, matching students with their research projects, mentoring, and assessing the quality of individual student performance. Research faculty also participate in the professional development workshops where they have an opportunity to share ideas and best practices.

Site Coordinators

Each partner institution of The Ohio LSAMP Alliance designates an individual to serve as LSAMP Site Coordinator. The responsibilities of this position include:

- Serves as a point of contact for LSAMP programming at their institution. Although the site coordinator may not directly oversee LSAMP programming, they facilitate contact with those persons carrying out programming at their institution.
- Disseminates information to LSAMP personnel at their institution. When information is sent from the alliance office, the site coordinator is responsible for disseminating it to the appropriate individuals at their institution, including students.
• Responds to communications and inquiries from the alliance director, program manager, and alliance partners
• Oversees the submission of enrollment forms, quarterly reports, supplemental invoice forms, and data for WebAMP.

The site coordinator is the contact person listed in WebAMP and will submit forms and data for their institution to the alliance director and program manager.

Program Coordinator

Each partner institution also has a Program Coordinator, who might also serve as Site Coordinator or as a member of the Steering Committee for The Ohio LSAMP Alliance. This individual provides programmatic support to the LSAMP Scholars Program at his/her institution. The responsibilities of this position includes:
• provides retention counseling and career advisement;
• maintains records of programming participation and student academic progression in their disciplines;
• connects students to institutional resources to assist in personal, academic, and professional development;
• assists with program planning and implementation;
• assists with the planning and implementation of STEM bridge or early arrival programs;
• assists with oversight of faculty and peer mentoring programs;
• maintains information on research opportunities for LSAMP Scholars;
• provides assistance in workshops and presentations;
• assists with the recruitment and selection of LSAMP Scholars;
• serves as a liaison to academic colleges and other university offices/personnel to develop community outreach and engagement to URM STEM students at his/her institution;
• works with community partners to disseminate recruitment materials;
• works with industry partners in fundraising and program opportunities;
• assists in Alliance-wide programming, task-forces, meetings, and communications
LSAMP Scholar Eligibility

There are three eligibility criteria for a undergraduate student to be an LSAMP Scholar:

1. Underrepresented minority as described by the LSAMP Program Description:
   - African American
   - Alaskan Native
   - American Indian
   - Hispanic American
   - Native Hawaiians
   - Native Pacific Islander

2. Citizen or permanent resident of the U.S. or its possessions

3. Enrollment at a participating institutions in an undergraduate major in a STEM discipline as defined at https://www.lsamp.org/help/help_stem_cip_2010.cfm

   a. Participating institutions include:
      - Central State University
      - Cincinnati State and Technical Community College
      - Cleveland State University
      - Cuyahoga Community College
      - Miami University
      - Sinclair Community College
      - The Ohio State University
      - University of Cincinnati
      - Wilberforce University
      - Wright State University

   b. Eligible Majors--NSF CIP Codes:

**Agricultural Sciences**

01.09 Animal Sciences
01.10 Food Science and Technology
01.12 Soil Sciences
01.99 Agriculture, Agriculture Operations and Related Sciences
03.0101 Natural Resources/Conservation, General
03.02 Natural Resources Management and Policy
03.03 Fishing and Fisheries Sciences and Management
03.05 Forestry
03.06 Wildlife and Wildlands Science and Management
03.99 Natural Resources and Conservation, Other

**Chemistry**

40.05 Chemistry
40.0507 Polymer Chemistry
40.0509 Environmental Chemistry
40.051 Forensic Chemistry
40.0511 Theoretical Chemistry.
40.1002 Materials Chemistry.
40.1099 Materials Sciences, Other.

**Computer Science**

11.01 Computer and Information Sciences, General
11.0104 Informatics (STEM Only)
11.04 Information Science/Studies
11.07 Computer Science
52.1201 Management Information Systems, General
52.1301 Management Science

**Engineering**

14.02 Aerospace, Aeronautical and Astronautical Engineering
14.03 Agricultural Engineering
14.05 Biomedical/Medical Engineering
03.0509 Wood Science and Wood Products/Pulp and Paper Technology
14.07 Chemical Engineering
14.0702 Chemical and Biomolecular Engineering.
14.0799 Chemical Engineering, Other.
14.1003 Laser and Optical Engineering.
14.1004 Telecommunications Engineering.
14.1099 Electrical, Electronics and Communications Engineering, Other.
14.32 Polymer/Plastics Engineering
14.4 Paper Science and Engineering.
14.41 Electromechanical Engineering.
14.43 Biochemical Engineering.
14.44 Engineering Chemistry.
14.45 Biological/Biosystems Engineering.
15.0306 Integrated Circuit Design.
15.1502 Engineering Design.
15.16 Nanotechnology.
04.02 Architecture
14.04 Architectural Engineering
14.08 Civil Engineering
14.0803 Structural Engineering
14.0805 Water Resources Engineering
14.14 Environmental/Environmental Health Engineering
14.09 Computer Engineering, General
14.10 Electrical, Electronics and Communications Engineering
14.12 Engineering Physics
<table>
<thead>
<tr>
<th>Code</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.13</td>
<td>Engineering Science</td>
</tr>
<tr>
<td>14.27</td>
<td>Systems Engineering</td>
</tr>
<tr>
<td>30.06</td>
<td>Systems Science and Theory</td>
</tr>
<tr>
<td>14.11</td>
<td>Engineering Mechanics</td>
</tr>
<tr>
<td>14.19</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>14.06</td>
<td>Ceramic Sciences and Engineering</td>
</tr>
<tr>
<td>40.18</td>
<td>Materials Engineering</td>
</tr>
<tr>
<td>14.20</td>
<td>Metallurgical Engineering</td>
</tr>
<tr>
<td>14.28</td>
<td>Textile Sciences and Engineering</td>
</tr>
<tr>
<td>40.10</td>
<td>Materials Science</td>
</tr>
<tr>
<td>14.21</td>
<td>Mining and Mineral Engineering</td>
</tr>
<tr>
<td>14.23</td>
<td>Nuclear Engineering</td>
</tr>
<tr>
<td>14.25</td>
<td>Petroleum Engineering</td>
</tr>
<tr>
<td>14.01</td>
<td>Engineering, General</td>
</tr>
<tr>
<td>14.22</td>
<td>Naval Architecture and Marine Engineering</td>
</tr>
<tr>
<td>14.24</td>
<td>Ocean Engineering</td>
</tr>
<tr>
<td>14.99</td>
<td>Engineering, Other</td>
</tr>
</tbody>
</table>

**Environmental Science**

<table>
<thead>
<tr>
<th>Code</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>03.0103</td>
<td>Environmental Studies</td>
</tr>
<tr>
<td>03.0104</td>
<td>Environmental Science</td>
</tr>
</tbody>
</table>

**Geosciences**

<table>
<thead>
<tr>
<th>Code</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.06</td>
<td>Geological and Earth Sciences/Geosciences</td>
</tr>
<tr>
<td>40.0601</td>
<td>Geology/Earth Science, General</td>
</tr>
</tbody>
</table>

**Life/Biological Sciences**

<table>
<thead>
<tr>
<th>Code</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.0403</td>
<td>Anatomy</td>
</tr>
<tr>
<td>26.0202</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>26.01</td>
<td>Biology, General</td>
</tr>
<tr>
<td>26.1101</td>
<td>Biometry/ Biometrics</td>
</tr>
<tr>
<td>26.1102</td>
<td>Biostatistics</td>
</tr>
<tr>
<td>26.1309</td>
<td>Epidemiology</td>
</tr>
<tr>
<td>26.0203</td>
<td>Biophysics</td>
</tr>
<tr>
<td>26.03</td>
<td>Botany/Plant Biology</td>
</tr>
<tr>
<td>26.0305</td>
<td>Plant Pathology/Phytopathology</td>
</tr>
<tr>
<td>26.0307</td>
<td>Plant Physiology</td>
</tr>
<tr>
<td>26.04</td>
<td>Cell/Cellular Biology and Anatomical Sciences</td>
</tr>
<tr>
<td>26.0401</td>
<td>Cell/Cellular Biology and Histology</td>
</tr>
<tr>
<td>26.0204</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>26.1301</td>
<td>Ecology</td>
</tr>
<tr>
<td>26.0505</td>
<td>Parasitology</td>
</tr>
<tr>
<td>26.0702</td>
<td>Entomology</td>
</tr>
</tbody>
</table>
26.0801 Genetics, General. (NEW)
26.0804 Animal Genetics. (NEW)
26.0805 Plant Genetics. (NEW)
26.1303 Evolutionary Biology
26.0806 Human/Medical Genetics
26.0508 Microbiology and Immunology.
26.0807 Genome Sciences/Genomics.
26.05 Microbiological Sciences and Immunology
26.0507 Immunology
26.0504 Virology
26.0503 Medical Microbiology and Bacteriology
26.1501 Neuroscience
19.05 Foods, Nutrition, and Related Services
30.1901 Nutritional Sciences
26.0910 Pathology/Experimental Pathology
26.1001 Pharmacology
26.1004 Toxicology
26.1104 Computational Biology.
26.131 Ecology and Evolutionary Biology.
26.0707 Animal Physiology. (NEW)
26.0901 Physiology, General. (NEW)
26.09 Physiology, Pathology and Related Sciences
26.07 Zoology/Animal Biology
26.1201 Biotechnology
26.1302 Marine Biology and Biological Oceanography
26.99 Biological and Biomedical Sciences, Other
30.01 Biological and Physical Sciences
30.10 Biopsychology
30.27 Human Biology.
30.3 Computational Biology.
30.32 Marine Sciences.

Mathematics

27.01 Mathematics
27.03 Applied Mathematics
27.0304 Computational and Applied Mathematics.
27.0306 Mathematical Biology.
27.0503 Mathematics and Statistics.
14.3701 Operations Research
27.99 Mathematics and Statistics, Other
30.08 Mathematics and Computer Science
27.05 Statistics
52.1304 Actuarial Science
Physics/Astronomy

40.02 Astronomy and Astrophysics
40.0809 Acoustics
40.08 Physics
40.0607 Oceanography, Chemical and Physical
40.0807 Optics/Optical Sciences
40.9999 Physical Sciences, Other

c. CIP Codes and Community Colleges

Identifying STEM majors at community colleges can be challenging because the program descriptions do not match the LSAMP CIP codes. Students should not be in a two-year terminal program with no intention of going on for a bachelor’s degree or graduate school. The intention of the LSAMP program is to increase the numbers of bachelor’s degrees in STEM among URM students. Community colleges must be careful in their selection of students to try to fund only those students who plan to get a bachelor’s degree in STEM.
Recruitment, Selection, and Enrollment of LSAMP Scholars

I. Recruitment of LSAMP Scholars

A. Use Recruitment Materials
   1. Brochure for The Ohio LSAMP Alliance
   2. Flyers specific to institution (see appendix for example)
   3. Web site for The Ohio LSAMP Alliance (ohiolsamp.org)
   4. LSAMP page on institutional web site
   5. Social media

B. Work with Community Partners to Recruit STEM Students
   1. STEM High Schools
   2. Ohio STEM Learning Network
   3. Ohio College Access Network
   4. The Ohio STEM Equity Pipeline

C. Generate list of eligible students

D. E-mail invitation to apply to eligible students (with flyer)

E. Enlist academic departments to identify and reach out to eligible students.

II. Selection Criteria

In addition to the eligibility criteria specified by the NSF, criteria that should be considered in the selection of LSAMP Scholars for The Ohio LSAMP Alliance include:

A. Funding Level of Student from other Sources

   The Expected Family Contribution (EFC) should be evaluated to determine whether students have additional need, and these students should be given priority. If students are already fully funded, the LSAMP stipend might reduce the funding provided from other sources.

B. Enrollment in or Participation in other Programs

   If your institution has a variety of student support programs and the LSAMP applicant is already enrolled in or participating in them, participation in LSAMP programming might become a burden, rather than a benefit, for the student. For example, some institutions have a variety of bridge or early arrival programs. LSAMP Scholars might not benefit from participating in more than one of these programs.
C. High School GPA and ACT/SAT Scores for Freshmen LSAMP Scholars

The primary consideration is that the student should be admitted into your institution and into STEM majors. At The Ohio State University, if students are admitted to OSU and into STEM majors, they have fulfilled the academic requirements for LSAMP, and high school GPA and ACT/SAT scores are not used as criteria by which students are selected.

D. GPA for Upper Level LSAMP Scholars

LSAMP partner institutions should set academic criteria for students to continue as LSAMP Scholars. At The Ohio State University, students must maintain a minimum cumulative grade point average of 2.8 or above. This requirement is waived for first semester freshmen and if the student is making progress at improving the GPA and fulfilling the other requirements of the LSAMP program.

E. Responses to Essay Questions

Answers to essay questions that address one or more of the following topics might be considered in the selection of LSAMP Scholars:

1. Future Career Goals:
   “Please discuss why you have selected you major and your future career goals.”
   a. Students who indicate they intend to go into the health sciences will not be given preference, although they will still be eligible to be LSAMP Scholars.
   b. Plans for graduate school or research are desired.

2. Understanding of LSAMP Programming:
   “Provided what you know about the LSAMP Scholars Program at The Ohio State University, how do you feel you will personally benefit from participating in the program throughout your academic career?”
   a. We want to make sure students understand that they receive stipends for participating in LSAMP programming. This is not a scholarship.
   b. It is preferred if students indicate they are looking forward to particular aspects of LSAMP programming.

3. Personal or academic challenges:
   “Describe a time when you have faced a difficult academic challenge or hurdle that you successfully navigated. What was the challenge and how did you handle it? Were there any personal or academic obstacles or challenges that had a significant impact on your high school experience?”
   a. These questions might identify financial need or first generation students.
b. This question is important in identifying how well students might be able to deal with obstacles and diversity issues.

III. Suggested Steps for Reviewing LSAMP Applications

A. Check applications for NSF eligibility criteria.

B. Check applications for additional selection/eligibility criteria.
   1. Work with financial aid office to determine funding levels and unmet needs of applicants.
   2. Work with academic departments to identify programming that is being offered from the departments to the applicants.

C. Work with academic departments to identify students who will benefit from LSAMP programming and will succeed in STEM disciplines.

D. Establish a selection committee that includes representatives from STEM academic departments to select students and an ordered alternate list.

IV. Enrollment of LSAMP Scholars

A. In order to assure student eligibility, the site coordinator at each partner institution will have students sign an enrollment form (see appendices).

B. This forms contains:
   1. Description of The Ohio LSAMP Alliance
   2. Student Eligibility Information:
      a. Race/ethnicity
      b. Citizenship
      c. Discipline
   3. Student Information (name, e-mail, gender, class rank, date of birth)
   4. Disability
   5. First Generation (parents’ level of education)
   6. Release and Signatures of Student
   7. Site Coordinator Approval and Certification

C. The enrollment form can then be matched with the activity information on the Supplemental Invoice Forms to assure that LSAMP funds are supporting eligible students in appropriate activities.

D. The Enrollment Form should be sent to the Alliance Director when students are enrolled.
The LSAMP Model

The LSAMP model for programming is based on two prominent streams of research and theory: a model of student retention, the Tinto model, which emphasizes academic and social integration of students into the academic institution; and the theory of disciplinary socialization, which is the process through which students become socialized into the STEM field of study as a profession.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic Achievement</td>
</tr>
<tr>
<td>Summer Bridge or Early Arrival Program</td>
<td>✓</td>
</tr>
<tr>
<td>Academic and Retention Advisement</td>
<td>✓</td>
</tr>
<tr>
<td>Tutoring and Supplemental Instruction</td>
<td>✓</td>
</tr>
<tr>
<td>Peer Mentoring</td>
<td>✓</td>
</tr>
<tr>
<td>Faculty-Mentored Research</td>
<td>✓</td>
</tr>
<tr>
<td>Stipend</td>
<td>✓</td>
</tr>
<tr>
<td>Articulation Agreements and Credit Transfers</td>
<td>✓</td>
</tr>
<tr>
<td>The Ohio LSAMP Alliance Conference</td>
<td>✓</td>
</tr>
<tr>
<td>Curricular Reforms in Mathematics</td>
<td>✓</td>
</tr>
<tr>
<td>Web-enabled sharing of courses and workshops</td>
<td>✓</td>
</tr>
</tbody>
</table>
**Scope of Work**  
**Required LSAMP Programming**

The Scope of Work documents that are part of each subaward of The Ohio LSAMP Alliances state that LSAMP programming includes: advisement and counseling, residential summer bridge or early arrival programs, undergraduate research, faculty and peer mentoring, and tutoring or supplemental instruction. Professional development workshops are also encouraged.

Each Scope of Work document includes the following:

- We will do the following as a partner of The Ohio LSAMP Alliance:
  - Advise students about The Ohio LSAMP Alliance programs. We will do this in pre-collegiate programs, during bridge or early arrival programs, during orientation, and throughout academic year advisement. In particular, students who are STEM majors, as well as those who are undecided in their majors, will be provided with information and counseling about the LSAMP programs.
  - Provide bridge or early arrival programs to entering first-year underrepresented students that focus on social integration and academic enrichment activities in STEM fields.
  - Provide undergraduate research opportunities and faculty mentoring for LSAMP Scholars.
  - Provide effective academic and retention advisement to LSAMP Scholars to help them become integrated into the university community and address academic, personal, social, financial, emotional, developmental, cultural, and ethnic issues that may affect the academic performance and retention of underrepresented students in STEM.
  - Provide peer mentoring for freshmen and sophomore LSAMP Scholars.
  - Provide tutoring or supplemental instruction for LSAMP Scholars.
  - Participate in one or more of The Ohio LSAMP Alliance task forces for the benefit of alliance-wide activities.
  - Participate in alliance-wide activities, including the biennial Ohio LSAMP Alliance conference.
  - Collect data on the gender, ethnicity, and program participation of LSAMP Scholars and track LSAMP Scholars’ progress to degree completion.
  - Complete quarterly reports on the participation of students in LSAMP programming according to the template and deadlines provided by The Ohio LSAMP Alliance director.
  - Send representatives to meetings of the Steering Committee.
  - Respond to requests from the office of The Ohio LSAMP Alliance Director and from task forces and partners of The Ohio LSAMP Alliance.
Participant Support Costs

Participant support costs are the direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with professional meetings, conferences, symposia, or training projects. At least 60% of LSAMP funds should go towards stipends for students to participate in LSAMP programming.

Allowable forms of Participant Support Costs include:

- Stipends to **eligible students** for their participation in forms of LSAMP programming: advisement and counseling, bridge or early arrival programs, peer mentoring, tutoring or supplemental instruction (paid to the tutor or to the tutored student) faculty mentoring, undergraduate research, professional development workshops, field trips, and other activities designed as part of LSAMP programming. Stipends are to be paid to the students after their participation in the LSAMP programming.
- Conferences expenses for **eligible students** (airfare, mileage, cab fare, or other transportation costs; hotel or other lodging, per diem or food, registration fees), including participation costs in the conference of The Ohio LSAMP Alliance.
- STEM bridge/early arrival programs for **eligible students** (housing, food, items essential to the program that students need and will keep)
- Travel for **eligible students** to present their research at professional meetings (airfare, mileage, cab fare, or other transportation costs; hotel or other lodging, per diem or food, registration fees)

Costs that Are Not Allowable for Participant Support Funding

- Costs of entertainment, amusement, diversion and social activities and any costs and any costs associated with such costs (such as meals, snacks, lodging, rentals, transportation, gratuities)
- T-shirts, backpacks, promotional materials, gifts, memorabilia, souvenirs
- Supplies, technology, equipment, computer programs
- Advertising and public relations costs

Participant support funds cannot be rebudgeted into other cost categories without OSU approval. Approval must be requested from and authorized by OSU (and NSF). Such approval is generally difficult to obtain and must be very well justified. Funds remaining in the PSC category at the end of the award cannot be used for other purposes, including offsetting over-expenditures in other cost categories.
Non-participant Support Costs

Participant support funds can be rebudgeted into the non-participant support (NSC) category only after approval has been obtained from OSU. The case was made at the March 5, 2015 meeting of the Steering Committee of The Ohio LSAMP Alliance to allow community colleges to request rebudgeting into the non-participant support category. Wilberforce University and Central State University also requested to have some LSAMP funds rebudgeted into the non-participant support category. The purpose of the rebudget is to provide staff support for LSAMP programming.

Guidelines

- The PI of the institution writes a letter to me on their letterhead, indicating how they would like to use the funds in the non-participant support category.
- At least 60% of the budget must still be for stipends for students.
- The non-participant support category may be used exclusively to fund staff support to carry out LSAMP programming.
- The individual(s) hired must work exclusively for LSAMP for the hours paid by NSF funds.
- The individual must participate in alliance-wide efforts through service on the Articulation Agreement and Credit Transfer Task Force.
- If the individual is a member of the staff, up to 40% of the LSAMP funds used can fund the position.
- If the individual is a member of the faculty, faculty release time must be less than 2 months (17%) and up to 40% of the LSAMP funds used.
- Invoices must separate expenses into the two categories: PSC and NSC (or two separate invoices)
- If an institution wants to use funds for NSC prior to the new subawards in August, we must write amendments to the current subawards.

Costs that Are Not Allowable for Non-Participant Support Costs

- Funds included in this award may not be used to augment the total salary or salary rate of faculty members during the period covered by the term of faculty appointments
- Reimbursement of faculty for consulting or other time
- Travel for faculty and staff
- Costs of entertainment amusement, diversion and social activities and any costs and any costs associated with such costs (such as meals, snacks, lodging, rentals, transportation, gratuities)
- T-shirts, backpacks, promotional materials, gifts, memorabilia, souvenirs
- Supplies, technology, equipment, computer programs
- Advertising and public relations costs
Invoices and Subawards

Quarterly Invoices

Partners should invoice quarterly according to the following schedule:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Programming Dates</th>
<th>Report/Invoice Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>July 1 – September 30</td>
<td>October 30</td>
</tr>
<tr>
<td>2</td>
<td>October 1 – December 31</td>
<td>January 30</td>
</tr>
<tr>
<td>3</td>
<td>January 1 – March 31</td>
<td>April 30</td>
</tr>
<tr>
<td>4</td>
<td>April 1 – June 30</td>
<td>July 30</td>
</tr>
</tbody>
</table>

Quarterly invoices may be submitted using the subrecipient’s standard invoice. This invoice must include, at minimum, the current bill amount, cumulative costs, subaward number, invoicing period, and certification as to the truth and accuracy of the invoice.

Invoices must separate expenses into the two categories: participant support costs (PSC) and non-participant support costs (NSC) if funding in the NSC category is requested. These expenses are tracked separately. Two separate invoices can be used each quarter, one for PSC and one for NSC, to help keep these expenses separate.

Participant Support Costs

For costs in the participant support category there must be sufficient specificity for OSU to ascertain that the PSC funds are being used in accordance with sponsor policy. F&A costs are not allowed on PSC expenditures.

Each invoice must contain the statement: “I certify that all expenditures reported (or payments requested) are for participant support costs as defined by the NSF and in accordance with the provision of the proposal and award documents for the above referenced grant/contract award number.”

At least 60% of LSAMP funds should go towards stipends for students to participate in LSAMP programming. Students are paid after they have completed LSAMP programming.

Non-Participant Support Costs

Costs in the non-participant support category may be used by the following institutions of The Ohio LSAMP Alliance: Central State University, Cincinnati State and Technical Community College, Columbus Community College, Cuyahoga Community College, and Wilberforce University. These costs must follow the guidelines established by the Steering Committee of The Ohio LSAMP Alliance:

- No more than 40% of the budget expenditures in this category
- Used to fund staff support to carry out LSAMP programming
Submitting Invoices

Partner institutions are reimbursed for eligible expenses after programming has taken place.

The site coordinator should keep a record of the who, what, where, when, and why for each expenditure to assure appropriate and effective use of funds. The Site Coordinator should review the financial figures and make sure they are correct according to the budget and previous invoices. The Site Coordinator should check to make sure the activities and students are eligible for funding from LSAMP and they are documented appropriately. The Site Coordinator should keep track of expenses and invoices to assure that invoiced expenditures to not exceed allocated funds.

Supplemental Invoice Form

The Supplemental Invoice Form is generated through the LSAMP Access data base, which can be accessed through Buckeye Box: box.osu.edu. Log in to view the information for your institution and generate this form.

The purpose of this form is to enable the Alliance Director to identify whether or not LSAMP funds have been used to pay for eligible activities. If the funds are being used to pay for stipends for students, the form identifies whether or not the students are eligible for funds. Students listed on the Supplemental Invoice Form should have already been listed on the Enrollment Form.

The Supplemental Invoice Form includes the following information:

- Activity description
- Activity goals and objectives
- Activity outcome
- List of attendees (name, race/ethnicity, major, amount of funding received)

The institution’s LSAMP Site Coordinator should submit the Supplemental Invoice Form to the Alliance Director when the institution’s grants management coordinator submits invoices to the Office of Sponsored Programs at The Ohio State University.

Budget Reallocation

After the first two year of The Ohio LSAMP Alliance (September 2013 through August 2015), there will not be automatic carry forward of LSAMP budgets. If a partner institution does not spend all allocated funds during the budget period, additional funds will not be allocated to that partner institution until they have spent the funds that had been allocated. Once an institution has spent their funds, they will be allocated what is still needed for the next budget period. If a partner requests additional funding, the Alliance Director will review the request according to appropriate and allocable funds.
Data Collection and Entry

Purpose

The National Science Foundation requests large amounts of data about students, faculty/staff, programming, partnerships, and more in order to assess the impact the grant funds are having, and to measure the progress toward objectives outlined in each alliance’s proposal. In addition to the data requested by the NSF, The Ohio LSAMP Alliance has hired IRC as an external evaluator for the grant, and will carry-out ancillary studies, both adding to the amount of data that is needed. This section discusses the use of an LSAMP Access Database that is used to reduce time and effort needed to comply with the data needs of the alliance.

The Ohio LSAMP Alliance has chosen to use Microsoft Access to assist with the data collection and entry needed for the NSF, WebAMP, External Evaluations, Ancillary Studies, and internal needs of each partner institution and of the alliance. The database consists of one master, or parent, database managed by the alliance leadership team at The Ohio State University, and eleven child databases for each of the partners in the alliance. The child databases feed data to the master database to ease the data submission processes. The site-coordinator at each institution will be responsible for collecting and entering data into the LSAMP Access Database. The alliance leadership team will use the data entered by the partners to submit on their behalf to the various parties requesting data. Therefore, it is very important that each partner update their data frequently so alliance leadership can pull the data and submit it to WebAMP and IRC.

Security and Access

The LSAMP Access Database is stored on Buckeye Box, a cloud storage service hosted by The Ohio State University. Site-coordinators may access the database either by logging in from https://box.osu.edu/ or navigating directly to the LSAMP Access Database folder using the following link: https://osu.box.com/s/nlbp3kf7kf20ocau704084uvsslydim

The LSAMP Access Database folder includes the master database, and the eleven institutions’ databases. Each database is password protected, and the password for the corresponding institution is granted to the site-coordinator. The alliance leadership team maintains the passwords for each institution and can change the password whenever there are possible security risks or personnel changes. This protocol is to limit the number of users, and to secure the personal information stored in each database.

LSAMP Access Database User Instructions

Getting Started

1. Download the file.
BuckeyeBox is not designed for editing Access files within the cloud service. Therefore, site-coordinators will need to download the LSAMP Access Database for their institution and store it on their computer while using the database. Once you are done entering data, you will then need to save the database back to the BuckeyeBox using the same name as the original file, ex: LSAMP Access Database – Ohio State. It is very important to save the file using the same name in order for the master database to pull the updated data into the main tables.

2. Enter your password.
   Once you have downloaded the file you will want to click on the file to open it. Once the file opens, it will request your password. Enter the password that has been sent to you via e-mail from the alliance leadership team. If you have lost your password, contact the alliance leadership team via e-mail.

3. Enable content.
   When you login there will be security warning located under the toolbar. Select the “Enable Content” button so you can begin to enter data.

Orientation to the Database

The database is organized with a switchboard and navigation pane that will allow you to access the forms and tables that you will need. The forms and tables are categorized in the navigation pane into the following:

1. Initial Data Entry
   This section is used to submit data for the first time. For example, when you enroll a student into the LSAMP program, gain the support of faculty/staff in your program, host a program/workshop or any activity that is part of the LSAMP Program Model that you need to keep track of participation, and when you engage with an industry partner.

2. On-Going Data Entry
   This section is used to maintain student records, but more importantly to submit data that is likely not known at the time a student enrolls in a program. For example, here you can assign students faculty mentors, undergraduate research advisors, indicate a change of major out of STEM, a student dropping out of your program for reasons other than graduation, but most importantly you will be able to track participation LSAMP Program Model activities.

3. Later Data Entry
   This section is used to submit data about students that is likely not known until shortly before our reports are due to our external parties requesting the data. This information will be requested to be completed by the alliance leadership team before it is due. Some of the data in this section are sensitive, ie: student academic record information such as grades and grade point average. There will be a predetermined 72 hour window of time to enter the data into the system,
after which the alliance leadership team will extract the data, store on a desktop, and remove the data from the database stored in BuckeyeBox as a security measure suggested by the Office of Chief Information Officer at The Ohio State University.

4. Data Export Queries
This section is used to store tables that are formatted for submission to our external parties. You may use these tables to export for your institution’s own needs.

Data Entry

The following section provides instructions for entering data into the database.

New Student Data Entry Form

1. Open the New Student Data Entry Form located in the navigation pane.
2. Complete ALL fields on the form
   a. Student ID – When assigning the Student ID, please be sure to enter the record number, which can be found at the bottom left of the form.
   b. Gender, Race, and Ethnicity Fields cannot be null. All fields for Race must either be Yes or No.
   c. Disability – All fields pertaining to disability must either by Yes or No.
   d. Major – Enter the name of the major at your institution.
   e. Discipline – Use LSAMP CIP Code to categorize majors into disciplines for WebAMP Reporting.
      https://www.lsamp.org/help/help_stem_cip_2010.cfm
   f. Class – Enter the academic class that student is in during the reporting year. Community college students will always be CommCol.
   g. Mentor – Every student must be assigned a mentor. If your student does not yet have a mentor, assign one of the LSAMP personnel to your student. This assignment is a drop-down list which is populated from the Faculty/Staff table. Be sure you have entered the Faculty/Staff into the table prior to being able to select the mentor. The field will appear blank for new Faculty/Staff until a WebAMP ID is assigned. This is not done until the end of the academic year.
   h. Enrollment Date – This is the date the student enrolled in your institution, not the LSAMP program.
   i. Transfer – If the students transferred from another institution complete the information, otherwise leave null.
   j. First Generation – Check the box if neither parent has earned a bachelor degree.
3. Save the record.
New Faculty/Staff Data Entry Form

1. Open the New Faculty/Staff Data Entry Form located in the navigation pane.
2. Complete **ALL** fields on the form
   a. Gender, Race, and Ethnicity Fields cannot be null. All fields for Race must either be Yes or No.
   b. Disability – All fields pertaining to disability must either be Yes or No.
   c. Discipline – Use LSAMP CIP Code to categorize profession into disciplines for WebAMP Reporting.
      
   d. Department – Enter the department of the faculty member.
   e. Faculty Rank – Enter the rank of the faculty, or position of the staff.
3. Save the record.

New Activity Data Entry Form

Enter the data manually following the completion of each activity. Please also enter activities that are not date specific (counseling/advisement, undergraduate research, peer mentoring, faculty mentoring, tutoring/supplemental instruction, conference presentations, publications, etc…) These are essential to understanding the programming taking place at each institution and how it influences the retention of LSAMP Level I students.

1. Open the New Activity Data Entry Form located in the navigation pane.
2. Complete **ALL** fields on the form
   a. Activity ID – When assigning the Activity ID, please be sure to enter the record number, which can be found at the bottom left of the form.
   b. Alliance – Enter **36** to indicate The Ohio LSAMP Alliance.
   c. Institutional FICE Code – This should be defaulted to your institution’s code as shown below:
e. Reporting Year – Based on the funding cycle, the reporting year will be the ending year of the funding cycle. (Ex: 2013-2014 data reporting is indicated as 2014.) This should be default.

f. Use the drop-down menus that have been built in order to select the field that is most appropriate for your activities.

g. Provide descriptions of the program, goals/objectives, and outcomes.

3. Save the record.

Industry Partner Entry

1. Open the Industry Partner Entry table located in the navigation pane.
2. Complete ALL fields on the table
   a. Non-academic Partner – Enter the name of the non-academic partner
   b. Type – Using the drop-down menu, select the type of the organization.
   c. Description – Provide narrative describing the relationship with the partner. Ex: Honda of America Manufacturing provides workshops at The Ohio LSAMP Alliance Conference. Honda also provides funds for programming.

3. Save and close the table.

Activity Logging

1. Open the Activity Logging table located in the navigation pane.
2. Once the table is open you should see all of your students populated along the left columns of the table, and then Activity 1-100 along the header. In
order to log participation in an activity, simply click the box for those students who participated in activity indicated above by the Activity ID.

For accuracy, open the New Activity Data Entry Form and use the arrows at the bottom left of the form to verify that the Activity Title and Activity ID match when logging participation.

3. Save and close the table.

Assigning Faculty Mentors

If your student was not assigned a mentor at the time of initial entry, or their faculty mentor needs to be updated, you will use this form.

1. Open the Assigning Faculty Mentors table located in the navigation pane.
2. Assign the Faculty Mentor – Once the table is open you should see all of your students populated along the left columns of the table, along with their gender, major, and class rank. Select the faculty mentor from the drop-down list which is populated from the Faculty/Staff table. Be sure you have entered the Faculty/Staff into the table prior to being able to select the mentor. The field will appear blank for new Faculty/Staff until a WebAMP ID is assigned. This is not done until the end of the academic year.
3. Save and close the table.

Assigning Undergraduate Research Advisors

1. Open the Assigning Undergraduate Research Advisors table located in the navigation pane.
2. Assign the Undergraduate Research Advisor – Once the table is open you should see all of your students populated along the left columns of the table. Select the faculty mentor from the drop-down list which is populated from the Faculty/Staff table. Be sure you have entered the Faculty/Staff into the table prior to being able to select the undergraduate research advisor. The field will appear blank for new Faculty/Staff until a WebAMP ID is assigned. This is not done until the end of the academic year.
3. Enter title/topic of the student’s research.
4. Save and close the table.

Major Change and Inactive Entry

1. Open the Major Change and Inactive Entry table located in the navigation pane.
2. If a student has changed their major to an ineligible major, record the date of the major change and check the inactive box. If a student is no longer part of the program for reasons other than graduating, mark them as inactive.
3. Save and close the table.
External Evaluator Data Entry

1. Open the External Evaluator Data Entry table located in the navigation pane.
2. Once the table is open you should see all of your students populated along the left columns of the table.
3. Complete **ALL** fields that are blank on the table.
   a. Left Date – If your student has dropped out of the institution, please indicate the withdrawal date.
   b. GPA – This may already be in the table if you have complete the Student Data WebAMP Entry already.
   c. Credit Hours – Total cumulative hours that the student has earned.
   d. General Chemistry I Grade – If the student took the course that academic year, enter the grade they earned.
   e. College Algebra Grade – If the student took the course that academic year, enter the grade they earned.
   f. Pre-Calculus Grade – If the student took the course that academic year, enter the grade they earned.
   g. Calculus I Grade – If the student took the course that academic year, enter the grade they earned.
   h. General Physics Grade – If the student took the course that academic year, enter the grade they earned.
   i. Mathematics for Engineering – If the student took the course at your institution, enter Yes.
4. Save and close the table.

Student Data WebAMP Entry

1. Open the Student Data WebAMP Entry table located in the navigation pane.
2. Once the table is open you should see all of your students populated along the left columns of the table.
3. Complete **ALL** fields that are blank on the table.
   a. GPA – This may already be in the table if you have complete the External Evaluator Data Entry table already.
   b. Graduated This Year – Yes or No.
   c. Academic Year Support – If your student received a stipend, subsistence, or travel funds during the academic year, answer Yes or No.
   d. Summer Financial Support - If your student received a stipend, subsistence, or travel funds during the summer, answer Yes or No.
4. Save and close the table.

Data Export Queries

The tables in this section are formatted so that you may use them for programming purposes at your institution. **Do not edit information on these tables.** You will need to export these tables into an Excel file.
1. Open the database.
2. Using the navigation pane, select the table, report, form or query that you wish to export.
3. Choose the External Data tab on the Ribbon.
4. Click the Excel button in the Export section of the External Data tab.
5. Provide an export file name and select the Excel format you would like to use for your export.
6. Click OK to begin the export.

Switchboard

The switchboard hosts quick access buttons where you will be able to print documents that are needed by the alliance leadership team in order to process invoices.

Invoice Submission

1. Navigate to the switchboard.
2. Click the Invoice button.
3. Enter the title of the activity for which you are submitting an invoice, and select OK. Repeat this for the second pop-up request.
4. Click the Print Invoice button.
5. A window will open asking you to designate where you would like to save Page One (Program Data) of the invoice. Designate that location on your computer and select Publish.
6. Complete any blank areas of the invoice.
7. A window will open asking you to designate where you would like to save Page Two (Student Data) of the invoice. Designate that location on your computer and select Publish.
8. Complete any blank areas of the invoice.
9. Submit the forms to the alliance director.
Task Force Descriptions

Ancillary Studies Task Force

Rationale
The make-up and programming of The Ohio LSAMP Alliance provides opportunities for many studies. The partner institutions have ceded IRB approval to The Ohio State University. When studies are developed for the alliance, amendments can be written to the IRB application, and surveys or other measurement instruments can be submitted for alliance-wide use.

Charge
The purpose of the Ancillary Studies Task Force is to identify, design, and carry out studies that will
- evaluate the impact of LSAMP programming on underrepresented minority recruitment, retention, persistence, and attainment of STEM degrees
- identify characteristics of URM STEM students that are associated with persistence and attainment of STEM degrees
- study differences among our 11 partner institutions that impact success in achieving the goals of LSAMP
- identify best practices for URM STEM student recruitment, retention, and attainment of degrees

Types of Studies (partial list of suggestions)
1. Mathematics Preparation for STEM Students
   a. Implementation and Assessment of Mathematics for STEM Applications course
   b. Surveys of STEM Faculty on mathematics skills needed in STEM

2. Assessments of STEM Early Arrival and Bridge Programs
3. Community College Pathways to STEM Degrees
   a. Collaborative Peer Mentoring with Four-Year Institutions
   b. Collaborative Faculty Mentoring with Four-Year Institutions
   c. Undergraduate Research and Co-ops with Four-Year Institutions
   d. Shared LSAMP Programming with Four-Year Institutions
   e. Bridge Programs

4. Assessment of Mentoring and Diversity Training Programs in LSAMP
5. Assessment of LSAMP Interventions:
   a. Tutoring versus Supplemental Instruction
   b. Types of Advisement
   c. Professional Development Programs

Description
Faculty and staff from the partner institutions can propose studies and work collaboratively to design, implement, and evaluate them.
Articulation Agreement and Credit Transfer Task Force

Rationale
“Credit Transfer” is an initiative of the Ohio Board of Regents to enhance the ability of students to transfer effectively between Ohio’s public post-secondary institutions of higher education. By building a comprehensive credit transfer system, the University System of Ohio helps students customize an educational pathway that fits their needs and budget. Knowing in advance that the courses and programs taken at one of Ohio’s public institutions will transfer around the state gives students the flexibility of choosing options that best suit them in terms of cost, convenience, and opportunities. They can begin their programs at less expensive community colleges and transfer to four-year universities. Easy transfers make it more likely that students will excel academically and graduate with a bachelor’s degree. An Articulation and Transfer Advisory Council was created to facilitate and guide the efforts that will ease credit transfer among Ohio’s institutions of higher education. This includes the conversion from quarters to semesters for several universities so that now all institutions are on the semester system and follow the same academic calendar. The Ohio Transfer Module (OTM) is the set of general education requirements that represents a common body of knowledge and academic skills. Students can complete general education courses anywhere in the public system. The Transfer Assurance Guides (TAGs) include the OTM and additional courses needed in majors. Courses in TAGs are guaranteed to transfer and apply directly to the major. There are currently 39 TAGs in eight specific discipline areas, and the courses are guaranteed to transfer and apply directly to the major. The Articulation & Transfer Clearinghouse (ATC) facilitates electronic exchange of student transcripts among Ohio state-assisted higher education institutions. The ATC provides institutions receiving transfer students with additional electronic information regarding how a transfer student’s current coursework matches with his or her new institution’s coursework so that transfer credits are considered in a consistent manner across the state.

Description
The Articulation Agreement and Credit Transfer Task Force will be made up of members of the faculty and staff of partner institutions who are interested in improving the transfer of credits among Ohio institutions of higher education and pathways from community colleges to four-year institutions. There should be a representative from the registrar’s office, admissions office, or counseling (in other words, someone involved with credit transfers). A member of the faculty is also useful for this task force, because faculty members are needed to make rules for credit transfers. The staff member representing each institution might reach out to appropriate faculty when needed. Steering Committee members will facilitate making appropriate connections and recommendations.

Charge
The Articulation Agreement and Credit Transfer Task Force of the Ohio LSAMP Alliance will investigate the current state of articulation agreements, credit transfers, and Transfer Assurance Guides (TAGs) in Ohio and how they impact partner institutions.
The task force will facilitate the formation of articulation agreements for STEM disciplines among Ohio institutions of higher education. This will be particularly beneficial to students transferring from community colleges to four-year institutions. The Ohio LSAMP Alliance web site will be used to bring all the information together for degree requirements at all institutions, along with equivalent courses.

Activities
- Investigate what articulation agreements and credit transfers are currently in place for each partner institution, particularly those involving STEM courses and degrees
- Determine the concerns and problems that partner institutions have with current articulation agreements
- Work with faculty to get rules for credit transfers
- Determine how accreditation of partner institutions impacts credit transfers
- Determine how TAGs need to be re-built due to the quarter-to-semester transfer
- Use u.select at www.transfer.org to determine equivalences and determine which STEM equivalences are missing

The Ohio LSAMP Alliance Logic Model Impacts Relevant to the Articulation Agreement and Credit Transfer Task Force
- Partners confirm benefits (interview/survey)
- Alliance activities will be sustained and supported by participating institutions
- Double the number of URM STEM students who transfer from 2-year to 4-year programs in 5 years
- 10 additional STEM programs with articulation agreements between 2-year and 4 year programs in 5 years
- 20% increase in URM STEM transfers from 2-year institutions per year
- Double the number of URM STEM transfers in 5 years
- Increased retention percent of URM transfers from 2-year institution

Conference Task Force

Rationale

The proposal of The Ohio LSAMP Alliance indicates that a biennial conference will be held in years 2 and 4 of the funding period. The conference will be structured to maximize networking interactions, to facilitate the development of an Ohio LSAMP Alliance community of scholars, and to reinforce students’ commitment to earn bachelor’s degrees and to pursue graduate study or employment in STEM-related fields. It will provide LSAMP Scholars with the opportunity to present their undergraduate research in poster sessions, participate in small group discussions within disciplines, learn the advantages of networking, share ideas and best practices with faculty and staff, meet with students form Alliance partner institutions, meet with others interested in STEM careers, and reinforce their commitment to their programs. Students will have an opportunity to talk with representatives from Alliance graduate schools, corporations, and government agencies.
Description and Charge
The Conference Task Force will be made up of faculty and staff from The Ohio LSAMP Alliance partner institutions. They will plan all aspects of the conference, including:

- hotel
- other facilities and space (meeting rooms)
- food and working with caterers/vendors/restaurants
- registration procedures
- review of research abstracts
- review of student workshop proposals
- review of faculty/staff workshop proposals
- industry excursions
- promotional materials (T-shirts, bags, industry materials, and so forth)
- video-recording of workshops
- photography
- transportation
- funding from industry and community partners
- preparation of conference program
  - welcome from Alliance Director
  - biosketches of presenters/speakers
  - student research abstracts
  - titles/descriptions of workshops
  - map of hotel
  - map of other venues
  - descriptions of excursions
  - schedule of activities
- preparation of conference materials
  - bags
  - nametags
  - evaluation forms
  - passport
- coordinate volunteers

Cyber-Sharing Task Force

Rationale
The online sharing of courses, workshops, videos, presentation materials (PowerPoint, prezi), and other resources can reduce duplication of effort while providing for collaboration among institutions. This can be effective in increasing the retention of URM STEM students by providing structured experiences that welcome them to community membership, provide unique learning experiences and topics, enable interaction with other STEM achievers, solidify their career identity as scientists, and provide them with the knowledge and skills they need to be effective students.
Description and Composition
The Cyber-Sharing Task Force will be made up of members of the faculty and staff of partner institutions who are interested in developing or providing courses, workshops, videos, and other materials that can be shared online and determining the best means for doing so. This can include the development of MOOCs (massive open online courses) on coursera, using iTunes University to post recordings of conferences, and posting materials to the Ohio LSAMP Alliance web site or other locations accessible to Alliance partners.

Charge
The Cyber-Sharing Task Force will determine best practices in online sharing of materials for the Ohio LSAMP Alliance and provide the ingenuity for the development and posting of online materials.

Activities
Development of online courses that provide structured experiences that welcome LSAMP Scholars from the partner institutions community membership, provide unique learning experiences and topics, enable interaction with other STEM achievers, solidify their career identity as scientists, and provide them with the knowledge and skills they need to be effective students
- Develop best practices for cyber-sharing of workshops in undergraduate research, diversity sensitivity training, study skills, and other topics that will assure success of the LSAMP Scholars
- Develop best practices for online sharing of other materials (presentations, brochures, handbooks, references, videos, etc.)

The Ohio LSAMP Alliance Logic Model Impacts Relevant to the Mathematics Curriculum Reform Task Force
- 8 conference workshops shared online (4 after year 2 and 4 after year 4)
- Library of 50 math problems with STEM applications shared online
- Online tutorials for 20 math problems with STEM applications
- Sustained webinars and videoconferences to be offered as part of sharing best practices and offering high quality, relevant professional development
- Determination of whether or not online sharing of courses is an effective way to improve retention of URM STEM students
- Development of a model for sharing online courses
- Availability of unique courses to a wider population of underrepresented STEM students
- Development of unique courses to benefit underrepresented STEM students
- Students confirm benefits of online courses and workshops (survey)
- Sustained sharing of Alliance four-year institutions and the community colleges in math programming, supplemental instruction, online coursework, multimedia conferencing, research opportunities, faculty development workshops, and student advisement and mentoring activities.
Industry and Community Partner Task Force

Rationale
In order to double the number of underrepresented minority baccalaureate degrees in STEM disciplines at partner institutions within five years, the Ohio LSAMP Alliance will need financial, programming, and recruitment support from industry and community partners. The National Science Foundation requires that NSF funding be used for stipends for LSAMP Scholars so that students participate in the programming (bridge/early arrival programs, tutoring or supplemental instruction, mentoring, and undergraduate research) that will support them in their attainment of STEM degrees. That means that there are essential expenses that are not covered by NSF funds. These include: additional stipends for undergraduate research, travel to professional meetings, social gatherings and awards banquets, gifts cards as incentives for completing the surveys required in program evaluation, support for the biennial Ohio LSAMP Alliance conference, meetings of the Steering Committee, field trips to industry, LSAMP Scholars retreats, and support of the task forces (Articulation Agreement and Credit Transfer Task Force, Mathematics Curriculum Reform Task Force, Cyber-Sharing Task Force, Ancillary Study Task Force, Ohio LSMAP Conference Task Force, and Community and Industry Partner Task Force). In addition, our industry and community partners can supplement LSAMP programming by providing field trips, retreats, tours of their research and development facilities, presentations or guest lectures, mentors and internships, workshops, and give students a better understanding of the level and scope of career opportunities open to individuals with STEM degrees. They can help in recruiting students into STEM and LSAMP partner institutions and provide community service and outreach opportunities for our LSAMP Scholars.

Description
The Industry and Community Partner Task Force will be made up of members of the faculty and staff of partner institutions who are interested in working with industry and community partners to enhance and support LSAMP programming. They will invite personnel from industry and community organizations to form an Industry Advisory Board to provide programming support. Members should include personnel from advancement, development, or foundation offices. Community partners include: the Ohio STEM Learning Network (OSLN), the Ohio College Access Network (OCAN), e-Tech Ohio, and STEM high schools—Dayton Early College Academy, Dayton Regional STEM School, Horizon Science Academy (Cleveland), and Metro Early College High School (Columbus).

Charge
The Industry and Community Partner Task Force will determine individuals and organizations interested in the financial, programming, and recruitment support of the LSAMP program. It will find the financial support for materials and activities not covered by NSF funding. It will determine additional programming activities that our industry and community partners can provide, including field trips, retreats, tours of their research and development facilities, presentations or guest lectures, mentors and internships, workshops, outreach and service learning opportunities, and giving students a better...
understanding of the level and scope of career opportunities open to individuals with STEM degrees.

**The Ohio LSAMP Alliance Logic Model Impacts Relevant to the Industry and Community Partner Task Force**
- Students confirm benefits of field trips and internships (survey)
- Sustained collaboration of industry partners with Alliance partners
- Source of funding and opportunities for LSAMP activities and student experiences

**Mathematics Curriculum Reform Task Force**

**Rationale**
Math can be a bottleneck to STEM degrees. When students need remediation in mathematics and are required to take courses in sequence, starting the requirements for their STEM majors can be delayed by one or more years. The curricular reform in mathematics will encourage students to learn math, help them succeed in their STEM disciplines, and help them understand the application of math to their STEM disciplines and why they learn the various skill sets in math. All partner institutions are committed to investigating reforms to the math curriculum that will provide for application of math to STEM, student-centered approaches, interactive classroom instruction with student participation, and co-curricular activities.

**Description and Composition**
The Mathematics Curriculum Reform Task Force will be made up of members of the faculty and staff of partner institutions who are interested in mathematics curriculum reform, understand its importance to persistence in STEM programs, and have expertise in mathematics curriculum and education.

**Charge**
The Mathematics Curriculum Reform Task Force will guide the process of mathematics curriculum reform throughout the Ohio LSAMP Alliance.

**Activities**
- Develop surveys of the mathematics and other STEM faculty at Alliance institutions to learn more about the current math curricula
- Conduct follow-up interviews at Alliance partner institutions
- Investigate current inquiry-based mathematics offerings at partner institutions
- develop STEM problem-solving applications
- determine best practices for coordinating concepts and skills learned in the required math courses with physics, chemistry, engineering, and biology
- determine best practices to transform courses to the benefit of our RM STEM students
- develop a library of fifty math problems with STEM applications
- develop twenty online tutorials that go through the solutions to each problem
• share best practices in math instruction on the Ohio LSAMP Alliance web site and at professional meetings

The Ohio LSAMP Alliance Logic Model Impacts Relevant to the Mathematics Curriculum Reform Task Force
• Better understanding of current math curricula at partner institutions
• Better understanding of how to teach math applications in STEM
• Library of 50 math problems with STEM applications
• Online tutorials for 20 math problems with STEM applications
• Sharing of best practices in math instruction for STEM students
• Improvement in grades in required math courses
Appendices

I. Supplemental Invoice Form
II. Enrollment Form
Supplemental Invoice Form

Invoice Number:
Date Submitted:
Institution:
Contact Person:
Contact Information:

Activity Title:
Date of Activity:
Target (Student, Faculty, Student/Faculty):
Coordinator(s):
Program Category (related to subaward):

Activity Description

Activity Goals and Objectives

Activity Outcomes

Submit to Barbara Fink, Alliance Director, fink.4@osu.edu
<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Race/Ethnicity</th>
<th>Major</th>
<th>Amount of Funding Received ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total**

Submit to Barbara Fink, Alliance Director, fink.4@osu.edu
The Louis Stokes Alliances for Minority Participation (LSAMP) program of the National Science Foundation assists universities and colleges in their efforts to increase underrepresented minority student recruitment, retention, persistence, and attainment of science, technology, engineering, and mathematics (STEM) degrees. It does this by the formation of alliances and carrying out specific programming. The Ohio LSAMP Alliance consists of 7 four-year institutions and 4 community colleges: Central State University, University of Cincinnati, Cincinnati State and Technical Institute, Cleveland State University, Columbus State Community College, Cuyahoga Community College, Miami University, The Ohio State University, Sinclair Community College, Wilberforce University, and Wright State University.

In order to be eligible to participate in The Ohio LSAMP Alliance, students must:

- Be an underrepresented minority as described by the LSAMP Program Description (African American, Hispanic, American Indian, Alaskan Native, Native Hawaiian, Native Pacific Islander)
- Be a citizen or permanent resident of the U.S. or its possessions
- Be enrolled at a participating institution in an undergraduate major in a STEM discipline as defined at https://www.lsamp.org/help/help_stem_cip_2010.cfm

Student ID #: ______________________________

Name: ________________________________

Last ____________ First ____________ Middle ____________

e-mail: ________________________________ Gender: □ Female □ Male Class Rank: □ FR □ SO □ JR □ SR

Date of Birth: ________________________________ Place of Birth: ________________________________

Citizenship: □ U.S. Citizen □ Permanent Resident Disability Status: □ yes □ no

Please mark one of the boxes provided for both “Ethnicity” and “Race.”

Ethnicity:
□ Hispanic or Latino (A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race)
□ Not Hispanic or Latino

Race:
□ Black or African-American (A person having origins in any of the black racial groups in Africa)
□ Native American (A person having origins in any of the original peoples of North America and maintaining cultural identification through tribal affiliation or community recognition)
□ Alaska Native (A person having origins in any of the original peoples of Alaska, including Eskimos or Aleuts)
□ Native Hawaiian or Other Pacific Islander (A person having origins in any of the original peoples of Hawaii, Guam, Samoa, Polynesia, Micronesia, or other Pacific Islands)
□ Asian (A person having origins in any of the original peoples of East Asia, Southeast Asia, or the Indian subcontinent. This area includes, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam)
□ White (A person having origins in any of the original peoples of Europe, North Africa, or the Middle East)
□ More than One Race — Minority (A person reporting two or more races and one or more of the reported categories: American Indian, Alaskan Native, Black or African American, Native Hawaiian or other Pacific Islander)
□ More than Once Race — Non-minority (A person reported two or more races and those races are White or Asian and no other categories in addition to White or Asian)

Major: ____________________________________________ Minor: ____________________________________________

Discipline (select one):
□ Agricultural Science □ Engineering □ Mathematics
□ Chemistry □ Geosciences □ Physics/Astronomy
□ Computer Science □ Life/Biological Sciences □ Environmental Science
Parent’s Level of Education:

Mother: □ No College □ Some College □ College Graduate □ Graduate School
Father: □ No College □ Some College □ College Graduate □ Graduate School

Participant Signature/Release:

The information I have submitted for this enrollment form is true and accurate to the best of my knowledge. I understand that to track the progress of The Ohio LSAMP Alliance Scholars and to evaluate program effectiveness, The Ohio LSAMP Alliance requires access to student information. The Ohio LSAMP Alliance is required to report individual student data to the National Science Foundation, including social security number, race/ethnicity, GPA, and enrollment status. This information is also used to study student transfer, retention, progression, and graduation. Photographs and research abstracts may also be obtained for use by The Ohio LSAMP Alliance in program dissemination materials, such as websites, newsletters, and reports. I agree that The Ohio LSAMP Alliance may contact me for purposes of promoting its program and agree, if contacted, to voluntarily provide and let The Ohio LSAMP Alliance use photographs, quotations, or other information to help The Ohio LSAMP Alliance in its public relations and fundraising efforts. I agree to furnish to The Ohio LSAMP Alliance such records, reports, transcripts, and certificates as The Ohio LSAMP Alliance may reasonable request. I also agree that The Ohio LSAMP Alliance personnel at my institution may contact the Office of the Registrar at my institution to obtain such information as The Ohio LSAMP Alliance may deem appropriate in connection with the program.

I authorize release and use of personal information, as described above, to The Ohio LSAMP Alliance program. I have read and understand all of the statements above.

Name (printed): __________________________________________________________
Signature: _____________________________________________ Date: ________________

LSAMP Campus Coordinator Approval and Certification

The above named student is approved as an LSAMP Scholar of The Ohio LSAMP Alliance and is eligible to receive funding from the National Science Foundation for this program.
□ Yes. This student meets all eligibility criteria.
□ No. This student does not meet all eligibility criteria.

Name (printed): __________________________________________________________
Signature: _____________________________________________ Date: ________________