



# ARKANSAS DEPARTMENT OF EDUCATION

## CONTRACT/GRANT AWARD ROUTING FORM

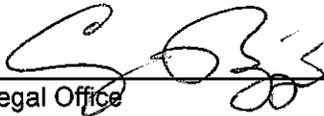
Use this routing form for obtaining approvals (in the order listed below) for **every Professional or Technical Services Contract, MOU, Grant Award or other agreement exceeding \$10,000**. When the form is complete, **the contract must be returned to the Finance Office**. The Finance Office will forward those exceeding \$50,000 to DFA for additional approvals.

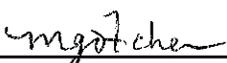
Contract with: Arch Ford ESC

Approved:  Date: 04/06/16  
Unit Leader

Approved: \_\_\_\_\_ Date: \_\_\_\_\_  
Assistant Commissioner

Approved:  Date: 4/7/16  
Finance Office

Approved:  Date: 4/15/16  
Legal Office

Approved:  Date: 4/20/16  
Commissioner/Deputy Commissioner

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# ARKANSAS DEPARTMENT OF EDUCATION

## CONTRACT/GRANT AWARD ROUTING FORM

Use this routing form for obtaining approvals (in the order listed below) for **every Professional or Technical Services Contract, MOU, Grant Award or other agreement exceeding \$10,000**. When the form is complete, **the contract must be returned to the Finance Office**. The Finance Office will forward those exceeding \$50,000 to DFA for additional approvals.

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Commissioner/Deputy Commissioner

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## 2016 Computer Science Professional Development Program Grant Memorandum of Understanding

This memorandum of understanding (MOU) is being entered into between the Arkansas Department of Education (ADE) and the Arkansas STEM Center, Arkansas Educational Service Cooperative, Arkansas public university, Arkansas public community college, or other public institution listed in Section I, hereinafter "INSTITUTION".

### Section I – INSTITUTION Information

Name: **Arch Ford Education Service Cooperative**  
Address: **101 Bulldog Drive  
Plumerville, AR 72127**  
Contact Name: **Lenett Thrasher**  
Contact Email: **lenett.thrasher@archford.org**

### Section II – Funding Information

Grant funding is subject to the availability of funds appropriated by legislative act for the purpose stated in the grant award. ADE reserves the right to reduce or void the grant award upon appropriated funds becoming reduced or unavailable. In addition, a grant agreement may be terminated by ADE at any time for any reason upon notice to the grant recipient.

ADE reserves the right to reduce funding if the initial funding projections are determined not to have been realistic based upon the number of actual applicants or other factors. Should additional funds become available for distribution, ADE will determine how these funds will be distributed.

Program funds shall not be obligated for expenditure before the beginning date of the grant or after the ending date of the grant. Funds may be requested only for those items that are reasonable and necessary for accomplishing the objectives of the program as defined in the application notice and for implementing activities as described.

Costs not included in the approved grant budget, including approved budget revisions, will not be reimbursed by ADE. Any costs that are incurred either before the start of the grant award or after the expiration of the grant award performance period are not allowable.

INSTITUTION must receive the benefit and liquidate all obligations incurred under the grant award no later than June 30, 2017.

For costs to be allowable to be charged to a grant, costs must generally meet the following criteria:

- Be necessary and reasonable for the performance of the grant and be allocable under the applicable cost principles



- Conform to limitations or exclusions set forth in the grant agreement as to types or amount of costs
- Be consistent with policies and procedures that apply uniformly to federally or state-funded activities and activities funded from other sources
- Be determined in accordance with generally accepted accounting principles (GAAP)
- Be adequately documented.

ADE will provide INSTITUTION up to **\$104,172.60** in grant funding for the ADE approved 2016 Computer Science Professional Development Program. Forward funding, not to exceed 50% of total program funding, in the amount of **\$52,086.30** will be made available to INSTITUTION on or before **April 29, 2016**. The remaining funding amount will be made available to INSTITUTION as reimbursements per the following schedule, subject to ADE receipt of invoices and attestations of meeting program requirements and MOU assurances.

The grant period for this funding is April 1, 2016 – June 30, 2017; INSTITUTION will return all funds not liquidated before June 30, 2017 to ADE by July 31, 2017.

#### **FY2016 – Q4 Reimbursement**

- Expenses, beyond already transferred amount, through June 20, 2016
- Invoice and attestation due to ADE on or before June 22, 2016
- Made available on or before July 29, 2016

#### **FY2017 – Q1 Reimbursement**

- Expenses, beyond already transferred amounts, through September 30, 2016
- Invoice and attestation due to ADE on or before October 4, 2016
- Made available on or before November 11, 2016

#### **FY2017 – Q2 Reimbursement**

- Expenses, beyond already transferred amounts, through December 31, 2016
- Invoice and attestation due to ADE on or before January 13, 2017
- Made available on or before February 24, 2017

#### **FY2017 – Q3 Reimbursement**

- Expenses, beyond already transferred amounts, through March 31, 2017
- Invoice and attestation due to ADE on or before April 5, 2017
- Made available on or before May 5, 2017

#### **FY2017 – Q4 Reimbursement**

- Expenses, beyond already transferred amounts, through June 20, 2017
- Invoice and attestation due to ADE on or before June 26, 2017



- Made available on or before July 29, 2017

### **FY2017 – Final Reimbursement**

- Expenses, beyond already transferred amounts, through June 30, 2017
- Invoice and attestation due to ADE on or before July 10, 2017
- Made available on or before August 4, 2017

### **Section III – Program Delivery**

INSTITUTION will provide professional development in the content area of computer science in accordance with the attached Computer Science Professional Development Program Grant Application 2016 submitted to ADE by INSTITUTION. Any provisions within the attached Computer Science Professional Development Program Grant Application 2016 that are in conflict with any provision within this MOU are declared invalid, and INSTITUTION must adhere to all provisions within this MOU.

INSTITUTION must commence and perform project activities according to established timelines. Failure to do so may result in reduction and reallocation of funds.

### **Section IV - Funding Use**

INSTITUTION will utilize all funding awarded under this grant for activities to provide professional development to Arkansas educators in the content area of computer science, at no charge to said educators or their employing institutions.

INSTITUTION will use Fiscal control and accounting procedures that permit the tracing of funds to a level of expenditure adequate to establish that funds have been used in accordance with grant award. The INSTITUTION must maintain effective control over and accountability for all funds, property, and other assets. The INSTITUTION'S financial management system must provide for the following:

- Identification, in its accounts, of grant awards received and expended for the program under which they were received.
- Accurate, current, and complete disclosure of the financial results of each grant award or program
- Records that identify adequately the source and application of grant funds
- Effective control over, and accountability for, all funds, property and other assets

INSTITUTION acknowledges that funding awarded under this grant is subject to all applicable federal and state laws and regulations in addition to the provisions herein Section II – Funding Information.

INSTITUTION acknowledges that it has reported planned uses for the funding and will not substantially deviate from the program approved and as indicated within the attached Computer



Science Professional Development Program Grant Application 2016 submitted to ADE by  
INSTITUTION

INSTITUTION will not use any grant award funds to either forward fund or reimburse program participants for any PRAXIS fees; INSTITUTION will direct participants that are seeking licensure endorsement to use the ADE CS PRAXIS Reimbursement Form found at <http://goo.gl/yHWjFF>.

INSTITUTION will insure, prior to any participant receiving a stipend as allowed under this MOU, that participant must satisfy one of the following requirements on or before June 1, 2017:

- for classroom educators completing a K-8 focus program must take part in follow-up opportunities for one school year through which they demonstrate proper CS embedding within their classes and support of other educators within their school and/or district. (maximum stipend amount of \$1,250.00)
- for district or school level educators completing a K-8 focus program must take part in follow-up opportunities for one school year through which they demonstrate how they are supporting broad classroom integration of the CS embedded standards through ongoing and meaningful professional development. (maximum stipend amount of \$1,250.00)
- for classroom educators completing the 7th/8th Grade Coding Block focus program must successfully instruct students in the 7th/8th Grade Coding Block standards and demonstrate support of other educators within their school and/or district in the 7th/8th Grade Coding Block standards and the embedded K-8 Computer Science Standards. (maximum stipend amount of \$1,500.00)
- for district or school level educators completing the 7th/8th Grade Coding Block focus program must take part in follow-up opportunities for one school year through which they demonstrate how they are supporting district-wide or school-wide implementation and instruction of the 7th/8th Grade Coding Block and the embedded K-8 Computer Science Standards through ongoing and meaningful professional development. (maximum stipend amount of \$1,500.00)
- for any individual completing an approved professional development offering focused on preparation to pass the assessment necessary to gain an ADE Computer Science Endorsement or provisional license for non-traditional programs must be successful in attaining the ADE Computer Science Endorsement (or ADE Provisional License in Computer Science) and supporting the instruction of one or more of the approved Act 187 courses through either a face-to-face or hybrid instructional model for the 2016-2017 school year. (maximum stipend amount of \$1,750.00)

INSTITUTION and participant will ensure that acceptance of any stipend is allowed under all applicable laws and rules, including district policy, prior to stipend award.

If the INSTITUTION fails to comply with any of the terms of the grant award, whether stated in a federal statute or regulation, an assurance, a state plan, application, grant award notification, or elsewhere, ADE may take one or more of the following actions:



- Temporarily withhold payments pending correction of the deficiency by the grant recipient;
- Disallow or deny both use of funds and matching credit for all or part of the cost of the activity or action not in compliance with the grant;
- Wholly or partly suspend or terminate the grant award;
- Withhold further awards for the grant program; or,
- Take other remedies that may be legally available

## **Section V – Reporting**

INSTITUTION will complete and submit with each reimbursement request an ADE Grant Budget/Expenditure Report and Budget Narrative found at <http://goo.gl/forms/1ed8hVU4x5>. Reimbursement funds will not be released to INSTITUTION until the requisite Grant Budget/Expenditure Report and Budget Narrative is submitted.

INSTITUTION will report to the ADE grant coordinator for this grant a list, in .xls file format, of all participants on July 1, 2016 and June 30, 2017 and include the following participant information:

- First and Last Name
- Arkansas Educator Licensure System Case ID – available at <https://goo.gl/gDI4hl>
- Official Email Address
- Employing LEA
- Current Licensure Codes – *same cell, comma delimited*
- Grades Currently Teaching – *using grade bands K-2, 3-5, 6-8, 9-12*
- Percentage of program competition – *INSTITUTION determined*
- Number of scheduled PD hours, as part of this MOU, in which participant was expected to participate
- Number of scheduled PD hours, as part of this MOU, in which participant has actually participated
- Amount of any stipend awarded to participant – *N/A for July 1, 2016 report*

## **Section VI – Failure to Comply**

ADE reserves the right to revoke a grant award for reasons including but not limited to the following:

- Noncompliance with the specified purpose of the grant award
- Failure to account for grant funds in accordance with standards for financial management, to retain proper documentation for grant expenditures, or to provide information to auditors or program monitors
- Failure to provide accurate, timely, and complete information as requested by ADE to evaluate the effectiveness of the grantee



## **Section VII – Other Assurances**

Administration of the program, activities, and services facilitated by the funding awarded within this MOU will be in accordance with all applicable state and federal statutes and regulations.

INSTITUTION will evaluate its program semiannually to assess its progress toward achieving its goals and objectives and use its evaluation results to refine, improve, and strengthen its program and to refine its goals and objectives as appropriate.

INSTITUTION will provide ADE representatives, and/or other state agency representatives, reasonable access to the campus and classrooms where programs and/or activities facilitated by grant funds awarded under this MOU.

INSTITUTION must disclose, in a timely manner, in writing to ADE all violations of criminal law involving, but not limited to fraud, bribery, or gratuity violations potentially affecting the grant recipient. Failure to make required disclosures can result in any of the actions described in the **Failure to Comply** section.

INSTITUTION will select and utilize a system of participant selection that is impartial and does not exclude, based on district of employ or federally protected class, any ADE Licensed Arkansas Educator.

INSTITUTION must disclose in writing any potential conflict of interest between the recipient and ADE employees. In addition, all grant recipients that receive in excess of \$25,000 will be required to complete the **“Contract and Grant Disclosure and Certification Form.”**

## **Section VIII – Commingling of Funds**

INSTITUTION must not deposit or record funds in a general account without the ability to identify each specific source of funds for any expenditures, which is known as commingling of funds. Funds from each Federal, State, local, and private funding source must be identified with a clear audit trail for each source. The accounting systems of all grant recipients must ensure that grant funds are not commingled with funds from other State or Federal agencies or private entities. Funds specifically budgeted and/or received for one project may not be used to support another

## **Section IX – Record Retention**

Financial records, supporting documents, statistical records and all other records pertinent to the grant award shall be retained by the grant recipient for four years following the end of the grant award performance period. The retention requirement extends to books of original entry, source documents supporting accounting transactions, the general ledger, subsidiary ledgers, personnel and payroll records, cancelled checks, and related documents and records.

- Source documents include paper or electronic copies of all grant awards, applications and required financial and narrative reports.



- Personnel and payroll records shall include the signed time and attendance reports for all individuals included in the project, whether they are employed full-time, part-time, or on a volunteer basis.
- Time and effort reports are required for employees with grant-funded salaries.

Grant recipients must further agree to permit access to these records to ADE program or fiscal staff, or any of their authorized representatives, as needed for monitoring purpose.

**Section X – Carryover of Grant Funds**

All encumbrances/obligations shall occur on or between April 1, 2016 and June 30, 2017.

INSTITUTION must receive the benefit and liquidate all obligations incurred under the grant award no later than June 30, 2017

If the grant recipient has not obligated all of its grant funds by June 30, 2017, any unexpended grant funds will be requested for return to ADE.

\_\_\_\_\_  
Johnny Key, Commissioner of Education  
Arkansas Department of Education

\_\_\_\_\_  
Date

\_\_\_\_\_  
INSTITUTION Authorized Representative  
Printed Name

\_\_\_\_\_  
INSTITUTION Authorized Representative  
Title

\_\_\_\_\_  
INSTITUTION Authorized Representative  
Signature

\_\_\_\_\_  
Date



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*Johnny Key*

\_\_\_\_\_  
Johnny Key, Commissioner of Education  
Arkansas Department of Education

*5/2/2016*

\_\_\_\_\_  
Date

*Lenett Thrasher*  
\_\_\_\_\_  
INSTITUTION Authorized Representative  
Printed Name

*Teacher Center Coordinator*  
\_\_\_\_\_  
INSTITUTION Authorized Representative  
Title

*Lenett Thrasher*  
\_\_\_\_\_  
INSTITUTION Authorized Representative  
Signature

*4-27-16*  
\_\_\_\_\_  
Date

#10



**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, February 25, 2016 8:06:04 AM  
**Last Modified:** Thursday, February 25, 2016 8:52:18 AM  
**Time Spent:** 00:46:13  
**IP Address:** 12.10.71.162

**PAGE 1: General Information**

|   |  |
|---|--|
| <b>Q1: Organization Name</b>                                | Arch Ford Education Service Cooperative  |
| <b>Q2: Organization Type</b>                                | Arkansas Educational Service Cooperative |
| <b>Q3: Organization LEA (if applicable)</b>                 | N/A                                      |
| <b>Q4: Organization Mailing Address (Line 1)</b>            | 101 Bulldog Drive                        |
| <b>Q5: Organization Mailing Address (Line 2) - optional</b> | <i>Respondent skipped this question</i>  |
| <b>Q6: Organization Mailing Address (City)</b>              | Plumerville                              |
| <b>Q7: Organization Mailing Address (Zip Code)</b>          | 72127                                    |
| <b>Q8: Contact Person (First Name)</b>                      | Lenett                                   |
| <b>Q9: Contact Person (Last Name)</b>                       | Thrasher                                 |
| <b>Q10: Contact Person (Email Address)</b>                  | lenett.thrasher@archford.org             |
| <b>Q11: Contact Person (Telephone XXX-XXX-XXXX)</b>         | 501-242-1658                             |
| <b>Q12: Contact Person (Title)</b>                          | Teacher Center Coordinator               |

**PAGE 2: Program Focus Selection**

|   |   |
|---|---|
| <b>Q13: Please select a program focus for this application (NOTE: each organization may submit a separate application for each focus area for which they wish to offer)</b> | Computer Science Endorsement and High School Level Computer Science Instruction Preparation |
|---|---|

**PAGE 3: Program Information**

**Q14: Provide a program description. Be certain to provide information related to the curriculum, content guide, and materials to be utilized**

In order to provide needed support for high school computer science in the Arch Ford Education Service Cooperative region, programming for a 20-member professional learning cohort will be designed in four phases.

Phase I will consist of a 3 day “boot camp” designed to help the participants pass the Praxis Assessment in Computer Science if they have not already done so. Curriculum materials for Phase I will be The Praxis Study Companion for Computer Science which can be accessed at no cost at [www.ets.org/s/praxis/pdf/5651](http://www.ets.org/s/praxis/pdf/5651) as well as the following two test-prep resources also found at the praxis link: Computer Delivered Testing Demonstrations and the Video “Your Computerized Praxis Testing Experience” and the 9-12 computer science standards.

Phase II is designed to immerse the participants in the computer science standards for 9-12 through a 3 day hands-on training led by Cyber Innovation Center’s National Integrated Cyber Education Research Center (NICERC). Participants will have free access to NICERC curriculum and in addition, will be provided technology, pedagogical resources and strategies for teaching computer science courses. Cyber Innovation Center, funded by the Department of Homeland Security, describes its computer science courses as hands-on, projects-based curriculum that utilizes a unique computing platform to engage students in an immersive exploration of the breadth of computer science. Through a puzzle-based learning approach that is strategically meshed with candid discussion of the philosophy and expectations that underlie the learning process, a foundation of problem solving and critical thinking is built, upon which the four major themes of computer science are then iteratively built as pillars. Various beams that showcase the applications of computer science are finally laid atop the pillars. The high-level goals of the curriculum are to (1) Expose students to the beauty of computer science through an engaging discovery process; (2) Show how exploring computer science can be used to solve hard problems; and (3) Cultivate problem solvers who are comfortable at tackling hard problems and who understand that computer science is a lifelong learning process.

Computer Science Units Within NICERC’s Computer Science Curriculum:

Algorithms form the basis for representing solutions to problems. Students focus on the development of good algorithms as solutions to interesting problems while discovering the importance of understanding problems in order to develop efficient step-by-step solutions.

Computer Programming explores the reasons for using computers to execute problem solutions for us. Students learn to translate their algorithms to a language computers can understand.

Data Structures explores various major data manipulation and processing structures used by computers. Students explore and utilize them as they design algorithms to solve problems.

Computer Architecture provides students with the foundations of computing. Using the Raspberry Pi 2 platform, students learn how computer hardware provides a powerful platform on which to run software.

Phase III is a five day professional development workshop experience- Education Discovery Forum (EDF) July 18-22, 2016 in Dallas, Texas. Participants will receive dynamic, hands-on training in implementing innovative, project-driven, Computer Science curriculum, providing them with a greater understanding of the curriculum design process, projects, and opportunities for implementation. While there, participants will have opportunity to interact with NICERC subject matter experts and many authors of the curricula. The \$595 registration fee includes each participant receiving 10 raspberry pi units for use in their classroom to serve up to 20 students per class and includes breakfast and lunch meals daily.

Phase IV is the implementation phase in which the participant will be the teacher of record for at least one computer science course utilizing the NICERC curriculum during the 16/17 school year. During this phase, participants will be supported through a fall and spring follow-up session and digital PLC sessions during the quarters no face-to-face follow-up is scheduled. The purpose for the follow-up sessions is reflective conversation centering around successes and collaboration on overcoming any barriers to student success in use of the curriculum.

**Q15: If your organization plans to contract with an outside vendor/provider to provide professional development, provide the name and website URL for that vendor/provider. (N/A for not applicable)**

For Phase I, ASMSA (<http://www.asmsa.org>); for Phases II, III, and IV, Cyber Innovation Center (<http://www.cyberinnovationcenter.org>) will collaborate with Arch Ford in designing the learning opportunities described.

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**Q16: Provide a schedule for the program. Be certain to include the days, times, and number of hours that the sessions are to meet.**

Each face-to-face session is 6 hours: 8:30-3:30;  
Digital PLC time investment is approximately 1 hour per month (during the months no face-to-face meeting is held).  
3 days Phase I bootcamp (early summer; off-contract- no subs needed; prep for Praxis;)  
2 days Phase II Summer 2016 (Cyber Innv. Center facilitating) off-contract - no subs)  
5 days summer July 18-22, 2016 (off-contract - no subs)  
1 day fall 2016 (subs needed)  
1 day spring 2017 (subs needed)

Participation in Digital PLC via blogging, google hang-out, zoom, email and/or other digital means each month no face-to-face meeting is held.

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**Q17: Provide a detailed plan to document evidence of program performance and success of the participants including all required and requested reporting.**

Success indicators include:

Active participation in all face-to-face sessions as well as digital PLC support sessions as evidenced by:

\*sign in sheets

\*exit slips/reflection logs

Participants will be required to sign-in at each face-to-face session and will complete reflections at the conclusion of each session including the digital PLC sessions.

Additional Success Indicators:

The facilitator and participants will collaborate to determine other possible data to be collected as evidence of the participants growth and development in CS such as, but not limited to: analyzing standards, reviewing and implementing the NICERC CS curriculum, designing formative and summative assessments, co-planning/co-teaching, observation or video-observation of other cs teachers with reflection, participant survey, etc.

The facilitator and participants will collaborate to determine other possible data to be collected as evidence of the students' growth and development in CS such as, but not limited to: pre/post assessments, student artifacts from project/assignments, % of students demonstrating proficiency of each CS standard, grades, student survey, etc.

Participants will also provide their Praxis results as a success indicators of Phase I (for those who had to participate in Phase I due to not having previously passed the Praxis in CS).

Participants will provide evidence of being teacher of record for one or more of the approved Act 187 courses through either a face-to-face or hybrid instructional model for the 2016-2017 school year.

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**Q18: Provide the qualifications required for all staff and instructors. If a project manager or director can be identified, please do so at this time.**

Qualifications for staff and instructors may include any of the following: CS degree, CS certification, or endorsement, CS teaching experience using inquiry-based, problem-based lesson activities, familiarity with CS standards, experience in facilitating adult learning preferred.

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**PAGE 4: Program Budget**

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**Q19: Total Grant Amount Requested**

73000.0

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Computer Science Professional Development Program Grant Application 2016

**Q20: Grant Forward Funding Requested in Dollar Amount (maximum of 50% of total proposed grant) -** 36500.00  
**NOTE: organization will be required to return all unused or excess funding once program completion information is submitted.**

**Q21: Proposed Cost Per Participant** 3650.0

**Q22: Estimated Number of Participants** 20.0

**Q23: Summary of the Program's Proposed Budget**

20 participants x \$1,750 stipend upon successful completion of the training - \$35,000  
 (10 off-contract days + digital PLC sessions = \$1,750)

20 participants x \$120 Praxis Assessment fee (reimbursed upon passing of the Praxis) = \$2,400

20 participants x (up to) \$80 x 2 days for subs = \$3,200

Phase I trainer (up to) \$500 per day x 3 days = \$1,500

Phase I Trainer Travel (to include mileage, lodging, meals on overnight stays; estimated) \$450 (3 days x \$150 lodging) + \$90 (200 mi round trip x .45) + \$90 (\$30 meals x 3 days) = \$630

Meals for Participants = 21 people x \$12 per meal x 13 days = \$3,276

EDF Lodging, dinner meal, mileage, and parking reimbursed up to \$1,300 x 20 participants = \$26,000

Materials/supplies = \$994

TOTAL= \$73,000

**DISTRICT INVESTMENT PER PARTICIPANT:**

EDF Registration (to include breakfast, lunch daily and 10 raspberry pi for each) \$595.

**ARCH FORD INVESTMENT PER PARTICIPANT:**

Facility & associated costs

Personnel (scheduling trainers, scheduling digital PLCs, registration, scheduling rooms, meals, session facilitation, etc) and associated costs

**Q24: Completer Individual Stipend Amount (if applicable)** 1750.0

**Q25: Total Amount Allocated for Participant Stipends (if applicable)** 35500.0

**Q26: WE, THE UNDERSIGNED, CERTIFY that the information contained in this application, is complete and accurate to the best of our knowledge; that the necessary assurances of compliance with applicable state and federal statutes, rules, and regulations will be met; and, that the indicated organization designated in this application is authorized to administer this grant. WE FURTHER CERTIFY that the assurances listed above, have been or will be satisfied and that all facts, figures, and representations in this application are correct to the best of our knowledge.**

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Yes

**Q27: First and last name of the authorized Representative certifying this application on behalf of the organization.**

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Lenett Thrasher

**Q28: Title of authorized Representative certifying this application on behalf of the organization.**

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Arch Ford ESC Teacher Center Coordinator

March 30, 2016 revisions indicated by strike-through and highlights.

#13 - Please select a program focus for this application. (NOTE: each organization may submit a separate application for each focus area for which they wish to offer.)

This program is designed to prepare existing Arkansas educators to pass the assessment necessary to gain an ADE Computer Science Endorsement on an Arkansas Educator's License (or individuals in non-traditional licensure programs to pass the assessment necessary to obtain an ADE Provisional License in computer science) and teach high school level computer science content. Arch Ford ESC is designing 3 programs to meet the Computer Science Professional Development and Programming needs of the districts in the Arch Ford region; one for each of the program focus areas detailed in the grant application.

14. Provide a program description. Be certain to provide information related to the curriculum, content guide, and materials to be utilized.

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**Phase I** will consist of a 3 day "boot camp" designed to help the participants pass the Praxis Assessment in Computer Science if they have not already done so. Curriculum materials for Phase I will be The Praxis Study Companion for Computer Science which can be accessed at no cost at [www.ets.org/s/praxis/pdf/5651](http://www.ets.org/s/praxis/pdf/5651) as well as the following two test-prep resources also found at the praxis link: Computer Delivered Testing Demonstrations and the Video "Your Computerized Praxis Testing Experience" and the 9-12 computer science standards.

**Phase II (This will now be Phase III due to the EDF and 2-day Arch Ford Training date changes.)** is designed to immerse the participants in the computer science standards for 9-12 through a 2 day hands-on training led by Cyber Innovation Center's National Integrated Cyber Education Research Center (NICERC). Participants will have free access to NICERC curriculum and in addition, will be provided technology, pedagogical resources and strategies for teaching computer science courses. Cyber Innovation Center, funded by the Department of Homeland Security, describes its computer science courses as hands-on, projects-based curriculum that utilizes a unique computing platform to engage students in an immersive exploration of the breadth of computer science. Through a puzzle-based learning approach that is strategically meshed with candid discussion of the philosophy and expectations that underlie the learning process, a foundation of problem solving and critical thinking is built, upon which the four major themes of computer science are then iteratively built as pillars. Various beams that showcase the applications of computer science are finally laid atop the pillars. The high-level goals of the

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**Phase IV** is the implementation phase in which the participant will be the teacher of record for at least one computer science course utilizing the NICERC curriculum during the 16/17 school year. During this phase, participants will be supported through a fall and spring follow-up session and digital PLC sessions during the quarters no face-to-face follow-up is scheduled. The purpose for the follow-up sessions is reflective conversation centering around successes and collaboration on overcoming any barriers to student success in use of the curriculum.

15. If your organization plans to contract with an outside vendor/provider to provide professional development, provide the name and website URL for that vendor/provider. (N/A for not applicable)

For Phase I, ASMSA (<http://www.asmsa.org>); for Phases II, III, and IV, Cyber Innovation Center (<http://www.cyberinnovationcenter.org>) will collaborate with Arch Ford in designing the learning opportunities described.

16. Provide a schedule for the program. Be certain to include the days, times, and number of hours the sessions are to meet.

Each face-to-face session is 6 hours: 8:30-3:30; Digital PLC time investment is approximately 1 hour per month (during the months no face-to-face meeting is held).

- 3 days Phase I bootcamp (early summer June 1, 2, & 3; off-contract- no subs needed; prep for Praxis;)
- 2 days Phase II Phase III Summer 2016 August 2 & 3 (Cyber Innv. Center facilitating) off-contract - no subs)
- Phase II 5 4 days summer July 18-22, 2016 July 25-28 (off-contract - no subs)
- 1 day fall 2016 (subs needed)
- 1 day spring 2017 (subs needed)
- Participation in Digital PLC via blogging, google hangout, zoom, email and/or other digital means each month no face-to-face meeting is held

17. Provide a detailed plan to document evidence of program performance and success of the participants including all required and requested reporting.

Success indicators include:

- Active participation in all face-to-face sessions as well as digital PLC support sessions as evidenced by:
  - sign in sheets
  - exit slips/reflection logs
  - passing score on the Praxis

Participants will be required to sign-in at each face-to-face session and will complete reflections at the conclusion of each session including the digital PLC sessions.

- Additional Success Indicators:
  - The facilitator and participants will collaborate to determine other possible data to be collected as evidence of the participants growth and development in CS which could range from analyzing standards, reviewing and implementing the NICERC CS curriculum, designing formative and summative assessments, co-planning/co-teaching, observation or video-observation of other cs teachers with reflection, participant survey, etc.

- The facilitator and participants will collaborate to determine other possible data to be collected as evidence of the students' growth and development in CS which could range from pre/post assessments, student artifacts from project/assignments, % of students demonstrating proficiency of each CS standard, grades, student survey, etc.
- Participants will also provide their Praxis results as a success indicators of Phase I (for those who had to participate in Phase I due to not having previously passed the Praxis in CS).
- Participants will provide evidence of being teacher of record for one or more of the approved Act 187 courses through either a face-to-face or hybrid instructional model for the 2016-2017 school year.

18. Provide the qualifications required for all staff and instructors. If a project manager or director can be identified, please do so at this time.

Qualifications for staff and instructors may include any of the following: CS degree, CS certification, or endorsement, CS teaching experience using inquiry-based, problem-based lesson activities, familiarity with CS standards, experience in facilitating adult learning preferred.

19. Total Grant Amount Requested:

\$70,600

20. Grant Forward Funding Amount Requested:

\$36,300

21. Proposed Cost Per Participant

\$3,650.00

22. Estimated Number of Participants

20

23.

Summary of the Program's Proposed Budget

20 participants x \$1,750 stipend upon successful completion of the training - \$35,000

(40.9 off-contract days + digital PLC sessions = \$1,750)

~~20 participants x \$120 Praxis Assessment fee (reimbursed upon passing of the Praxis) = \$2,400~~

(Removed by A.O.)

20 participants x (up to) \$80 x 2 days for subs = \$3,200

Phase I trainer (up to) \$500 per day x 3 days = \$1,500

Phase I Trainer Travel (to include mileage, lodging, meals on; estimated) \$450 (3 days x \$150 lodging) + \$90 (200 mi round trip x .45) + \$90 (\$30 meals x 3 days) = \$630

Meals for Participants = 21 people x \$12 per meal x 13 days = \$3,276

EDF Lodging (for those traveling in excess of 50 miles), dinner meal (for those who qualify for lodging), mileage, and parking reimbursed up to \$1,300 x 20 participants = \$26,000  
Materials/supplies = \$994  
TOTAL ~~\$73,000~~ \$70,600 (Reduced by Anthony Owen since the Praxis cost is reimbursed through other means)

**District Investment per participant:**

EDF Registration (to include breakfast, lunch daily and 10 raspberry pi for each) \$595- EDF Registration will be included for this 20 member cohort in the state-wide CS grant proposal AF is submitting.

**Cooperative Investment:**

Facility & associated costs

Personnel (scheduling trainers, scheduling digital PLCs, registration, scheduling rooms, meals, session facilitation, etc) and associated costs

24. Completer Individual Stipend Amount

\$1,750

25. Total Amount Allocated for Participant Stipends (if applicable)

\$35,500

Mr. Owen,

I would like to request additional grant funds for the area of 9-12 computer science. As you know, we requested and received funding for 20 participants to attend a Cyber Innovation Center conference in Dallas, Texas in July 2016. However, we are requesting funding to bring this conference to Arkansas so that in addition to our 20 participants, we may open this learning opportunity to an additional 40 participants for a total of 60 participants. These funds would cover the cost of the 4-day training and would cover the daily continental breakfast and lunches. This conference would be held at the EAST facility which is available free of charge. However, there would be a need for an Arch Ford staff member to be present to cover setting up meals, trash pick-up, and general cleaning during the conference.

The training cost will include workshop training personnel, travel for the team, and workshop supplies. Participants will receive materials including 10 Raspberry Pi's (per school).

The additional funds needed are described in more detail below:

**Little Rock CIC Training**

Location: EAST  
6215 Ranch Drive  
Little Rock, AR 72223

Dates: July 25-28, 2016

Times: 8:30-4:30 daily

**Little Rock CIC Training Cost**

|   |                 |
|---|-----------------|
| CIC Training Provider                       | \$24,887        |
| CIC Workshop Supplies                       | \$ 9,000        |
| Food (continental breakfast, lunch, snacks) |                 |
| \$40 per day x 60 participants x 4 days     | 9,600           |
| Staff Pay to Provide Set-up/Clean-up        |                 |
| During Conference                           |                 |
| (\$13 per hour x 36 hours)                  |                 |
| + Mileage (\$.55 x 60 miles x 4 days)       | <u>\$ 600</u>   |
| <b>Total Grant Request</b>                  | <b>\$44,087</b> |

Lodging, travel, and dinner meals for the additional 40 participants will be at the expense of the individual or school district.

These expenses were included in the original grant for the 20 member cohort.

March 30, 2016 revisions indicated by strike-through and highlights.

#13 - Please select a program focus for this application. (NOTE: each organization may submit a separate application for each focus area for which they wish to offer.)

This program is designed to prepare existing Arkansas educators to pass the assessment necessary to gain an ADE Computer Science Endorsement on an Arkansas Educator's License (or individuals in non-traditional licensure programs to pass the assessment necessary to obtain an ADE Provisional License in computer science) and teach high school level computer science content. Arch Ford ESC is designing 3 programs to meet the Computer Science Professional Development and Programming needs of the districts in the Arch Ford region; one for each of the program focus areas detailed in the grant application.

14. Provide a program description. Be certain to provide information related to the curriculum, content guide, and materials to be utilized.

In order to provide needed support for high school computer science in the Arch Ford Education Service Cooperative region, programming for a 20-member professional learning cohort will be designed in four phases.

**Phase I** will consist of a 3 day "boot camp" designed to help the participants pass the Praxis Assessment in Computer Science if they have not already done so. Curriculum materials for Phase I will be The Praxis Study Companion for Computer Science which can be accessed at no cost at [www.ets.org/s/praxis/pdf/5651](http://www.ets.org/s/praxis/pdf/5651) as well as the following two test-prep resources also found at the praxis link: Computer Delivered Testing Demonstrations and the Video "Your Computerized Praxis Testing Experience" and the 9-12 computer science standards.

**Phase II (This will now be Phase III due to the EDF and 2-day Arch Ford Training date changes.)** is designed to immerse the participants in the computer science standards for 9-12 through a 2 day hands-on training led by Cyber Innovation Center's National Integrated Cyber Education Research Center (NICERC). Participants will have free access to NICERC curriculum and in addition, will be provided technology, pedagogical resources and strategies for teaching computer science courses. Cyber Innovation Center, funded by the Department of Homeland Security, describes its computer science courses as hands-on, projects-based curriculum that utilizes a unique computing platform to engage students in an immersive exploration of the breadth of computer science. Through a puzzle-based learning approach that is strategically meshed with candid discussion of the philosophy and expectations that underlie the learning process, a foundation of problem solving and critical thinking is built, upon which the four major themes of computer science are then iteratively built as pillars. Various beams that showcase the applications of computer science are finally laid atop the pillars. The high-level goals of the

curriculum are to (1) Expose students to the beauty of computer science through an engaging discovery process; (2) Show how exploring computer science can be used to solve hard problems; and (3) Cultivate problem solvers who are comfortable at tackling hard problems and who understand that computer science is a lifelong learning process.

### **Computer Science Units Within NICERC's Computer Science Curriculum:**

**Algorithms** form the basis for representing solutions to problems. Students focus on the development of good algorithms as solutions to interesting problems while discovering the importance of understanding problems in order to develop efficient step-by-step solutions.

**Computer Programming** explores the reasons for using computers to execute problem solutions for us. Students learn to translate their algorithms to a language computers can understand.

**Data Structures** explores various major data manipulation and processing structures used by computers. Students explore and utilize them as they design algorithms to solve problems.

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Meals for Participants = 21 people x \$12 per meal x ~~13~~ 7 days = ~~\$3,276~~ \$1,764 (cost of meals for July 25-28 conference will be included in the additional conference grant request)

EDF Lodging (for those traveling in excess of 50 miles), dinner meal (for those who qualify for lodging), mileage, and parking reimbursed up to ~~\$1,300~~ \$850 x 20 participants = ~~\$26,000~~ \$17,000

Materials/supplies = \$994

TOTAL ~~\$73,000~~ \$60,088 (Reduced by Anthony Owen since the Praxis cost is reimbursed through other means)

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| \$40 per day x 60 participants x 4 days                          | 9,600                                  |
| Staff Pay to Provide Set-up/Clean-up                             |  |
| During Conference  |  |
| (\$13 per hour x 36 hours)                                       |  |
| + Mileage ( <del>\$ .55</del> <b>\$ .54</b> x 60 miles x 4 days) | \$ <del>600</del> <b>\$597.60</b>      |
| <b>Total Grant Request</b>                                       | <del>\$44,087</del> <b>\$44,084.60</b> |

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