APPLICATION FOR GRANTS
UNDER THE
Perkins Innovation and Modernization Grant Program
CFDA # 84.051F
PR/Award # V051F190061
Grants.gov Tracking#: GRANT12883170

OMB No. 1894-0006, Expiration Date:
Closing Date: Jun 14, 2019
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<td>e130</td>
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<td>Attachment - 6 (1239-Appendix F)</td>
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<td>Attachment - 7 (1240-Appendix G)</td>
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<td>Attachment - 9 (1242-Appendix J)</td>
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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).
**Application for Federal Assistance SF-424**

<table>
<thead>
<tr>
<th>*1. Type of Submission:</th>
<th>*2. Type of Application:</th>
<th>* If Revision, select appropriate letter(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Preapplication</td>
<td>[ ] New</td>
<td></td>
</tr>
<tr>
<td>[x] Application</td>
<td>[ ] Continuation</td>
<td></td>
</tr>
<tr>
<td>[ ] Changed/Corrected Application</td>
<td>[ ] Revision</td>
<td></td>
</tr>
</tbody>
</table>

**3. Date Received:** 06/14/2019

**4. Applicant Identifier:** WY

**5a. Federal Entity Identifier:**

**5b. Federal Award Identifier:**

**State Use Only:**

**6. Date Received by State:**

**7. State Application Identifier:** Wyoming

**8. APPLICANT INFORMATION:**

**8a. Legal Name:** Wyoming Department of Education

**8b. Employer/Taxpayer Identification Number (EIN/TIN):** 830208667

**8c. Organizational DUNS:** 8098723360000

**d. Address:**

- **Street1:** 122 W. 25th St. Suite E200
- **City:** Cheyenne
- **State:** WY: Wyoming
- **Province:** USA: UNITED STATES
- **Zip / Postal Code:** 82002-0000

**e. Organizational Unit:**

**Department Name:**

**Division Name:**

**f. Name and contact information of person to be contacted on matters involving this application:**

- **Prefix:** Dr.
- **First Name:** Laurel
- **Middle Name:**
- **Last Name:** Ballard
- **Suffix:** Ph.D.
- **Title:** Student and Teacher Resources Team Supervisor

**Organizational Affiliation:** Wyoming Department of Education

**Telephone Number:**

**Fax Number:**

**Email:**
**Application for Federal Assistance SF-424**

* 9. Type of Applicant 1: Select Applicant Type:
A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:
Department of Education

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

* 12. Funding Opportunity Number:
ED-GRANTS-041519-001

* Title:
Office of Career, Technical, and Adult Education (OCTAE): Perkins Innovation and Modernization Grant Program CFDA Number 84.051F

13. Competition Identification Number:
84-051F2019-1

Title:
Perkins Innovation and Modernization Grant Program

14. Areas Affected by Project (Cities, Counties, States, etc.):
1245-2019-06-10 AREAS AFFECTED BY PROJECT.p

* 15. Descriptive Title of Applicant’s Project:
Boot Up Wyoming: Developing Computer Science Micro-credentials for Teachers and Students

Attach supporting documents as specified in agency instructions.

**PR/Award # V051F190061**
### Application for Federal Assistance SF-424

16. Congressional Districts Of:
   * a. Applicant  WY-001
   * b. Program/Project  WY-001

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:
   * a. Start Date: 10/01/2019
   * b. End Date: 09/30/2022

18. Estimated Funding ($):

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<td>a. Federal</td>
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<td>b. Applicant</td>
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<td>c. State</td>
<td>205,000.00</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>d. Local</td>
<td>45,000.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>e. Other</td>
<td>0.00</td>
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<td>f. Program Income</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td>g. TOTAL</td>
<td>1,614,965.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. Is Application Subject to Review By State Under Executive Order 12372 Process?
   - [ ] a. This application was made available to the State under the Executive Order 12372 Process for review on
   - [ ] b. Program is subject to E.O. 12372 but has not been selected by the State for review.
   - [x] c. Program is not covered by E.O. 12372.

20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)
   - [ ] Yes
   - [x] No

If "Yes", provide explanation and attach

** 21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

[ ] ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

#### Authorized Representative:

Prefix: Mr.

Middle Name: 

* Last Name: Carroll

Suffix: 

* Title: Chief Operating Officer

* Telephone Number: 

Fax Number: 

* Email: 

* Signature of Authorized Representative: Laurel Ballard  * Date Signed: 06/14/2019
**Wyoming - Perkins Innovation and Modernization Grant**

*Boot Up Wyoming: Developing Computer Science Micro-credentials for Teachers and Students*

This grant is focusing efforts with three school districts in Wyoming, including:

- **Carbon County School District #1**
  615 Rodeo Street
  Rawlins, WY 82301

- **Fremont County School District #14**
  636 Blue Sky Highway
  Ethete, WY 82520

- **Uinta County School District #1**
  537 10th Street
  Evanston, WY 82931

The school districts serve all students in their districts, which includes the opportunity zones listed in the table below.

<table>
<thead>
<tr>
<th>County</th>
<th>City</th>
<th>Census Tract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>Rawlins</td>
<td>56007967700</td>
</tr>
<tr>
<td>Fremont</td>
<td>Wind River Reservation</td>
<td>56013940100</td>
</tr>
<tr>
<td>Uinta</td>
<td>Evanston</td>
<td>56041975400</td>
</tr>
</tbody>
</table>
The work associated with the Wyoming Department of Education and the Professional Teaching Standards Board will ultimately have statewide impacts as the project deliverables will be distributed across Wyoming.
## U.S. DEPARTMENT OF EDUCATION
### BUDGET INFORMATION
#### NON-CONSTRUCTION PROGRAMS

| Name of Institution/Organization | Education, Wyoming Department of |

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

### SECTION A - BUDGET SUMMARY
#### U.S. DEPARTMENT OF EDUCATION FUNDS

<table>
<thead>
<tr>
<th>Budget Categories</th>
<th>Project Year 1 (a)</th>
<th>Project Year 2 (b)</th>
<th>Project Year 3 (c)</th>
<th>Project Year 4 (d)</th>
<th>Project Year 5 (e)</th>
<th>Total (f)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personnel</td>
<td>6,500.00</td>
<td>6,500.00</td>
<td>6,500.00</td>
<td>6,500.00</td>
<td>6,500.00</td>
<td>32,500.00</td>
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<tr>
<td>2. Fringe Benefits</td>
<td>2,145.00</td>
<td>2,145.00</td>
<td>2,145.00</td>
<td>2,145.00</td>
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<tr>
<td>3. Travel</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Equipment</td>
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<td>61,750.00</td>
<td>61,750.00</td>
<td>141,750.00</td>
<td>141,750.00</td>
<td>448,750.00</td>
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<tr>
<td>5. Supplies</td>
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<td>125,000.00</td>
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<td>25,000.00</td>
<td>25,000.00</td>
<td>300,000.00</td>
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<tr>
<td>6. Contractual</td>
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<td>61,750.00</td>
<td>141,750.00</td>
<td>141,750.00</td>
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</tr>
<tr>
<td>7. Construction</td>
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<tr>
<td>8. Other</td>
<td>125,000.00</td>
<td>125,000.00</td>
<td>25,000.00</td>
<td>25,000.00</td>
<td>25,000.00</td>
<td>300,000.00</td>
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<tr>
<td>9. Total Direct Costs (lines 1-8)</td>
<td>50,395.00</td>
<td>195,395.00</td>
<td>195,395.00</td>
<td>175,395.00</td>
<td>175,395.00</td>
<td>791,975.00</td>
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<tr>
<td>10. Indirect Costs*</td>
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<td>21,493.45</td>
<td>21,493.45</td>
<td>19,293.45</td>
<td>19,293.45</td>
<td>87,117.25</td>
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<tr>
<td>11. Training Stipends</td>
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<td>216,888.45</td>
<td>216,888.45</td>
<td>194,688.45</td>
<td>194,688.45</td>
<td>879,092.25</td>
</tr>
</tbody>
</table>

*Indirect Cost Information (To Be Completed by Your Business Office):

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

1. Do you have an Indirect Cost Rate Agreement approved by the Federal government? □ Yes □ No

2. If yes, please provide the following information:
   - Period Covered by the Indirect Cost Rate Agreement: From: 07/01/2017 To: 06/30/2020 (mm/dd/yyyy)
   - Approving Federal agency: □ ED □ Other (please specify):
   - The Indirect Cost Rate is 11.00%.

3. If this is your first Federal grant, and you do not have an approved indirect cost rate agreement, are not a State, Local government or Indian Tribe, and are not funded under a training rate program or a restricted rate program, do you want to use the de minimis rate of 10% of MTDC? □ Yes □ No. If yes, you must comply with the requirements of 2 CFR § 200.414(f).

4. If you do not have an approved indirect cost rate agreement, do you want to use the temporary rate of 10% of budgeted salaries and wages? □ Yes □ No. If yes, you must submit a proposed indirect cost rate agreement within 90 days after the date your grant is awarded, as required by 34 CFR § 75.560.

5. For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that: □ Is included in your approved Indirect Cost Rate Agreement? Or. □ Complies with 34 CFR 76.564(c)(2)? □ Yes □ No. The Restricted Indirect Cost Rate is 11.00%.

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Tracking Number: GRANT12883170
Funding Opportunity Number: ED-GRANTS-041519-001
Received Date: Jun 14, 2019 08:36:04 PM EDT
### SECTION B - BUDGET SUMMARY

**NON-FEDERAL FUNDS**

<table>
<thead>
<tr>
<th>Budget Categories</th>
<th>Project Year 1 (a)</th>
<th>Project Year 2 (b)</th>
<th>Project Year 3 (c)</th>
<th>Project Year 4 (d)</th>
<th>Project Year 5 (e)</th>
<th>Total (f)</th>
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</thead>
<tbody>
<tr>
<td>1. Personnel</td>
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<td>61,448.70</td>
<td>61,448.70</td>
<td>61,448.70</td>
<td>61,448.70</td>
<td>307,243.50</td>
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<td>2. Fringe Benefits</td>
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<td>23,019.93</td>
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<td>23,019.93</td>
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<td>3. Travel</td>
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<td>4. Equipment</td>
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<td>7. Construction</td>
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<tr>
<td>8. Other</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>9. Total Direct Costs (lines 1-8)</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>422,343.15</td>
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<tr>
<td>10. Indirect Costs</td>
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<tr>
<td>11. Training Stipends</td>
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<tr>
<td>12. Total Costs (lines 9-11)</td>
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<td>84,468.63</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>84,468.63</td>
<td>422,343.15</td>
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</tbody>
</table>

### SECTION C - BUDGET NARRATIVE (see instructions)
ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).


14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

19. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL
Laurel Ballard

TITLE
Chief Operating Officer

APPLICANT ORGANIZATION
Education, Wyoming Department of

DATE SUBMITTED
06/14/2019
DISCLOSURE OF LOBBYING ACTIVITIES
Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

ORM Number: 4040-0013
Expiration Date: 02/28/2022

1. * Type of Federal Action:
   a. contract
   b. grant
   c. cooperative agreement
   d. loan
   e. loan guarantee
   f. loan insurance

2. * Status of Federal Action:
   a. bid/offer/application
   b. initial award
   c. post-award

3. * Report Type:
   a. initial filing
   b. material change

4. Name and Address of Reporting Entity:
   Prime  SubAwardee
   * Name  Wyoming Department of Education
   * Street 1 122 W. 25th St. Suite E200  Street 2
   * City Cheyenne  State WY:  Wyoming  Zip 8200200000

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency:
   Department of Education

7. * Federal Program Name/Description:
   CFDA Number, if applicable:

8. Federal Action Number, if known:

9. Award Amount, if known:

10. a. Name and Address of Lobbying Registrant:
    Prefix  * First Name  N/A  Middle Name
    * Last Name  N/A  Suffix
    * Street 1  N/A  Street 2
    * City  N/A  State WY:  Wyoming  Zip

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

   * Signature: Laurel Ballard
   * Name: Prefix  Mr.  * First Name  Trent  Middle Name
   * Last Name  Carroll  Suffix
   Title: Chief Operating Officer
   Telephone No.: Date: 06/14/2019

Federal Use Only:

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Standard Form - LLL (Rev. 7-97)
The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America’s Schools Act of 1994 (Public Law (P.L.) 103-382).

To Whom Does This Provision Apply?
Section 427 of GEPA affects applicants for new grant awards under this program. ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

What Does This Provision Require?
Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?
The following examples may help illustrate how an applicant may comply with Section 427.

(1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.

(2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.

(3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

(4) An applicant that proposes a project to increase school safety might describe the special efforts it will take to address concern of lesbian, gay, bisexual, and transgender students, and efforts to reach out to and involve the families of LGBT students.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

Estimated Burden Statement for GEPA Requirements
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit (Public Law 103-382). Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20210-4537 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1894-0005.
ED GEPAForm 427

Wyoming - Perkins Innovation and Modernization Grant

Boot Up Wyoming: Developing Computer Science Micro-credentials for Teachers and Students

This grant is focusing efforts with three school districts in Wyoming, including:

- Carbon County School District #1
  615 Rodeo Street
  Rawlins, WY 82301

- Fremont County School District #14
  636 Blue Sky Highway
  Ethete, WY 82520

- Uinta County School District #1
  537 10th Street
  Evanston, WY 82931
The work associated with the Wyoming Department of Education and the Professional Teaching Standards Board will ultimately have statewide impacts as the project deliverables will be distributed across Wyoming. Materials developed throughout this project will be available online and made accessible for students with disabilities. This grant is also has a target audience of Native American educators and students.
CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION
Education, Wyoming Department of

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Mr.  * First Name: Trent  Middle Name:  

Last Name: Carroll  Suffix:  

Title: Chief Operating Officer

* SIGNATURE: Laurel Ballard  * DATE: 06/14/2019
1. Project Director:

Prefix: 
First Name: Laurel 
Middle Name: Ballard 
Last Name: Ph.D.
Suffix: 

Address:
Street1: 122 W. 25th St. Suite E200 
Street2: 
City: Cheyenne 
County: 
State: WY: Wyoming 
Zip Code: 820020000 
Country: USA: UNITED STATES 

Phone Number (give area code) 
Fax Number (give area code) 

Email Address: 

2. Novice Applicant:

Are you a novice applicant as defined in the regulations in 34 CFR 75.225 (and included in the definitions page in the attached instructions)?
☐ Yes  ☐ No  ☒ Not applicable to this program

3. Human Subjects Research:

a. Are any research activities involving human subjects planned at any time during the proposed Project Period?
☐ Yes  ☒ No 

b. Are ALL the research activities proposed designated to be exempt from the regulations?
☐ Yes  ☐ Provide Exemption(s) #: 1 2 3 4 5 6
☐ No  ☐ Provide Assurance #, if available: 

If applicable, please attach your “Exempt Research” or “Nonexempt Research” narrative to this form as indicated in the definitions page in the attached instructions.
Abstract
The abstract narrative must not exceed one page and should use language that will be understood by a range of audiences. For all projects, include the project title (if applicable), goals, expected outcomes and contributions for research, policy, practice, etc. Include population to be served, as appropriate. For research applications, also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that this investigation builds upon and that provides a compelling rationale for this study)
- Research issues, hypotheses and questions being addressed
- Study design including a brief description of the sample including sample size, methods, principals dependent, independent, and control variables, and the approach to data analysis.

[Note: For a non-electronic submission, include the name and address of your organization and the name, phone number and e-mail address of the contact person for this project.]
Perkins Innovation and Modernization Grant

Abstract
Abstract
The Wyoming Department of Education and its partners, which include the University of Wyoming, the Wyoming Professional Teaching Standards Board, the American Institute for Research, and three Wyoming school districts, propose a pilot project to prepare teachers to deliver high quality CS instruction to Wyoming’s secondary students. The overarching premise of this project is that with rigorous CS standards, robust CS curricula, and expert delivery of CS curricula by highly qualified teachers, Wyoming students will acquire critical skills necessary for success in the 21st century workforce. Uniquely designed, this project proposes to develop a system of state approved, stackable micro-credentials through which Wyoming teachers will not only acquire CS skills, but will also have the incentives and the resources needed to successfully teach CS at the secondary level. Additionally, these micro-credentials will be created in such a way that students will have a pathway to earn a subset of the same teacher developed CS micro-credentials leading to industry certification.

Key objectives for this project include 1) building capacity in Wyoming to develop high quality stackable CS micro-credentials; 2) developing and piloting CS micro-credentials; 3) creating incentives for educators to want to earn CS micro-credentials; and 4) allowing students who earn CS micro-credentials to receive course credit for the micro-credentials as well. Project activities include defining skills teachers need to effectively teach computer science; assembling and aligning micro-credentials, where both teachers and students can earn micro-credentials and industry certification; designing and piloting course content that educators can use to acquire the skills needed to earn micro-credentials; building the capacity of postsecondary institutions to create computer
science courses focused on skills and competencies aligned to micro-credentials; creating a series of stackable micro-credentials that would allow an educator to earn a K-12 CS endorsement; assisting school districts in developing policies and revising salary schedules to allow micro-credentials to count toward education requirements and incentivize teachers to earn micro-credentials; and ensuring Wyoming statutes and regulations allow students who earn micro-credentials can receive course credit. To attain the project’s objectives and support its activities, the Wyoming Department of Education is requesting $489,715.35. This along with the required match from the Wyoming Department of Education is adequate to implement the objectives and the activities of this project.
Project Narrative File(s)

* Mandatory Project Narrative File Filename: 1246-Project Narrative Final.pdf

Add Mandatory Project Narrative File  Delete Mandatory Project Narrative File  View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File  Delete Optional Project Narrative File  View Optional Project Narrative File
Perkins Innovation and Modernization Grant

PROJECT NARRATIVE
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PROPOSED PROJECT

The Wyoming Department of Education (WDE) and its partners propose a project to prepare Wyoming secondary students to enter the 21st century workforce with Computer Science (CS) skills that align with labor market needs (See Appendix A, Consortium Agreements). Recognizing that in order for more students to attain the education and the skills required to succeed in high-skill, high-wage, and/or in high-demand occupations, the WDE has developed this project to integrate and improve CS instruction and opportunities for secondary students in Wyoming. The overarching premise of this project is that with rigorous CS standards, robust CS curricula, and expert delivery of CS curricula by highly qualified teachers, Wyoming students will acquire critical skills necessary for success in the 21st century workforce (Carl D. Perkins Career and Technical Education Act of 2006, Strengthening Career and Technical Education for the 21st Century). This project is not only designed to ensure that teachers have the skills, but also the incentives and the resources needed to successfully teach CS at the secondary level through the development and the deployment of CS micro-credentials. Uniquely designed, this project proposes to develop the micro-credentials in such a way that students will have a pathway to earn a subset of the same teacher developed CS micro-credentials leading to industry certification.

As a part of this project, the WDE will collaborate with the Wyoming Professional Teaching Standards Board, the Wyoming State Board of Education, the University of Wyoming (UW), and highly recognized industry partners to further define competencies necessary to effectively teach CS at the secondary education level, to design CS course...
content, and to develop high quality micro-credentials. WDE will also work with its industry partners to assist teachers and students with receiving course credits and industry certifications.

BACKGROUND

Wyoming is the least populated state in the nation, with a total population estimated at 575,000 citizens. While it may lack for population, the state doesn’t like for area. Wyoming ranks ninth in geographical area, and with only six people per square mile ranks second in the nation in population density (US Census Bureau, 2015)\(^1\). Scattered throughout the state are 48 school districts which serve approximately 92,000 students. The rural nature of the entire state creates challenges for quickly making and managing changes that impact K-12 education.

The Wyoming Legislature in 2018 responded to the changing landscape of the 21\(^{st}\) century learner by passing legislation mandating school districts to require CS throughout K-12 no later than the 2022-23 school year. Since then, the WDE has worked closely with school districts to identify the supports needed to supply teachers with skills to teach CS across K-12. With such a limited number of certified CS educators (the Wyoming Professional Teaching Standards Board (PTSB) data indicates only 31 Wyoming teachers are currently credentialed with CS Education in grades 6-12), it is clear that a large-scale effort toward training teachers and enabling them to become endorsed in CS is critical.

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\(^1\) www.census.gov
Typically, for educators seeking CS endorsements requires them to go back to school to take at least five undergraduate courses in CS. For many educators, this course work can be daunting, especially for those educators who already hold concerns about teaching CS. To assist Wyoming districts in getting CS endorsed teachers into the classroom quickly, the Wyoming PTSB recently created a Computing Technology Exception Authorization which allows currently certified teachers who will be teaching a CS course to teach a “slice” of CS by receiving training through various forms of professional development. Although this Computing Technology Exception Authorization has provided districts with a quick way to get teachers into the classroom, the exception authorization limits what areas the teacher can teach within CS. Of the 31 currently credentialed CS teachers, 10 of them are on exception authorizations. As CS programs begin to expand within a school district, this exception authorization will not allow districts nor educators to be agile enough to meet the growing student demand for CS courses.

PROJECT NEED

Wyoming recently passed legislation mandating access to CS instruction for all students in K–12 education by the beginning of the 2022-23 school year (Senate Enrolled Act 0048, 2018). In response to this mandate, the WDE in 2018 conducted a needs assessment to determine what districts needed in order to adequately meet the Legislature’s expectations. The results of this needs assessment show that districts require (a) expanded professional development opportunities, (b) opportunities to
connect across districts concerning CS education, and (c) boosted capacity in order for them to provide real-time, on-site instructional coaching for teachers (WDE, 2018). Like many states, Wyoming is currently building the infrastructure to support CS education in its K–12 system (Code.org, 2018). In 2019, Wyoming will ratify new and robust CS education standards, and Wyoming school districts (many of which are rural districts), will need to fully implement these standards. Schools throughout the state intend to implement CS education using one of four models: (a) an instructor who teaches CS standards as part of a “special” or pullout class, (b) an instructor who teaches CS standards as an elective class, (c) a CS teacher who travels from class to class and teaches alongside the classroom teacher, or (d) a classroom teacher who integrates the CS standards into existing curricula. Regardless of the model, Wyoming districts report that their biggest need is for professional development. Most new CS teachers have little or no CS background or training and limited professional development resources—a common dilemma for new CS teachers nationwide (Yadav et al., 2016). So far, over 400 educators in Wyoming have attended very specific training provided by the University of Wyoming or by its industry partner Code.org. The focus of the trainings was primarily on teaching Advanced Placement CS principals, not on the competency-based skills of a standard. Meaning once teachers returned to their districts, they often felt isolated from resources and opportunities to interact with other CS teachers when they needed help implementing what they had learned (Ryoo et al.,

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2 WDE Report to the Joint Education Interim Committee, 2018.
2015). District administrators also report a need for professional development. While the forthcoming CS content standards will be critical for defining a vision and expectations for instruction, districts still need support to understand these new standards, choose a curriculum, and assess student learning. Moreover, to sustain the innovation after the initial professional development for teachers, districts are considering how to build their own capacity to provide instructional coaching to CS teachers (WDE, 2018).

THE SOLUTION

With the legislation passed and CS standards in the final stages of approval, the focus of the WDE has shifted to training and credentialing teachers, thereby ensuring students in Wyoming have 21st century computer science and computational literacy skills upon exit from any public school in the state. In order to meet this challenge WDE has created an innovative approach aimed at assisting with the implementation and the integration of Wyoming’s new, CS standards. The proposed project (known as Boot Up Wyoming) is designed to ensure teachers have the skills and knowledge to successfully teach CS at the secondary level through the development and deployment of high-quality professional development leading to CS micro-credentials (also known as competency-based measures). The unique aspect of the project is that the design of the micro-credentials will be planned in such a way that students will also have the

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5 Ryoo, et. al. It takes a village: supporting inquiry and equity-oriented computer science pedagogy through professional learning community, 2015.
6 WDE Report to the Joint Education Interim Committee, 2018.
opportunity to earn the same CS micro-credentials the teachers are earning leading to industry certification.

The project’s purpose is focused on two groups: students and teachers. Through Boot Up Wyoming, students will have access to rigorous CS standards taught by high quality instructors. They will also have the opportunity to show competencies in CS that are recognized by industry. Finally, they will be able to develop relationships within the CS industry and attain a better understanding of work opportunities. As a result of this same project, educator CS knowledge and skills will increase. Additionally, teacher self-efficacy in CS education will increase. Finally, educators will earn CS endorsements through stackable micro-credentials.

Developing and introducing new content and pathways into a district’s already existing curricula offerings is a complicated process and requires a shift in thinking and learning.

The WDE chose to use Knoster’s Model for Managing Complex Change (an evidence-based model) in designing its overall plan for supporting districts with the challenges presented with the Legislative changes and the rigorous timelines for ensuring every student, in every school has the opportunity to learn CS. Implementation of this type of project requires a system’s change approach. It challenges leadership and educators to think differently. To support Districts in making this change, the WDE will utilize the Knoster’s Model as a tool to successfully create a community of learners and build the capacity of the State, its school districts, and its students in integrating CS and computational thinking across all domains. The strength of the model is that specific components have been identified as necessary for successful change management. Perhaps more important is the way the model reveals and cautions against specific
emotional challenges or barriers organizations may face if an element of the model is missing.

The theory of Knoster’s Model for Managing Complex Change is built upon five components. When the components, including vision, skills, incentives, resources, and action planning, are collectively inherent within systems, there is an increased likelihood for a successful outcome in the change process. A visual description of the process is presented in the diagram below.

The five elements of Knoster’s Model include:

- **Vision**: A clear vision provides a vivid image of the desired future that will result in the adoption and the implementation of a project. A lack of vision leads to **confusion**.
- **Skills**: This requires identifying and assembling the proficiencies necessary to successfully perform the tasks required by the project. The absence of the necessary skills will result in **anxiety** for everyone with responsibility for the project.
- **Incentives**: Everyone needs something specific that encourages and motivates participation and action. These specifics may vary role to role. If key players are not provided incentives that help them see the value in enthusiastic participation, but
instead are corralled into “jumping on board,” resistance is likely inevitable.

**Resources:** A project must have the means to achieve success, including money, staff, support, equipment and facilities. Without these resources, team members feel frustration.

**A Plan:** A robust and clearly articulated plan defines the steps that must be taken for development and implementation to succeed. Lacking a plan will put participants on an unproductive “treadmill.”

Using this theory of action, the WDE has already begun supporting districts with visioning and strategic planning through offering the SCRIPT (Strategic CSforALL Resource & Implementation Planning Tool) training developed by CSforALL, a clearing house of CS resources which supports education entities. The purpose of the SCRIPT training is to support the WDE, PTSB, UW, school districts, industry, and the Wyoming Computer Science Technical Advisory (CSTA) Chapter, in developing micro-credentials for use by both teachers and students.

This project as presented within this grant application is designed to target the skills, incentives, and resource components of Knoster’s model. Doing so will ensure that teachers have the skills, the incentives, and the resources needed to successfully teach CS at any grade level, especially the secondary level, through the development and deployment of CS micro-credentials.

In addition, this project proposes that the micro-credentials can be developed in such a way that students have the opportunity to earn at least a subset of the same CS micro-credentials the teachers are earning, which would then lead to students being better...
prepared for the workforce and post-secondary education in CS. This provides students with an opportunity to create a high-quality, personalized path for learning.

GOALS and ACTIVITIES

The Wyoming Department of Education and its partners have identified the following goals and activities as essential elements in successfully implementing the rigorous requirements of Wyoming’s legislative mandate to provide every student in every school the opportunity to gain a foundation in CS — including in specific content areas, critical thinking, and inquiry-based problem solving. What follows is a table that details the timeline and the agency and/or the Party responsible for implementing the specific activities designed to meet each of the project’s four goals.

PROJECT GOALS, ACTIVITIES, TIMELINES AND RESPONSIBILITIES

| Goal: Develop and pilot CS micro-credentials. The opportunity would provide both students and teachers a pathway for earning the micro-credentials and industry-recognized certifications. |
|---|---|---|
| **Activity** | **Timeline** | **Responsible Party** |
| Using Wyoming’s CS Content and Performance Standards, define the competencies teachers need to effectively teach CS, including both understanding the CS content and how to teach CS. | YR. 1 | WDE, UW, PTSB and District Staff |
| Working with project partners, develop and pilot the course content educators could use to develop the skills needed to earn micro- |
| CFDA Number 84.051F | PR/Award # V051F190061 | Page 9 | Page e34 |
credentials.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a series of stackable micro-credentials that would allow an educator to earn a K-12 CS endorsement.</td>
<td>YR. 1</td>
<td>WDE, UW, PTSB and District Staff</td>
</tr>
<tr>
<td>Partner with industry to define how the stackable micro-credentials would allow students to earn industry recognized certifications.</td>
<td>YR. 3</td>
<td>WDE, UW, Industry Partners and District Staff</td>
</tr>
<tr>
<td>Partner with industry to pilot a specific stack of CS micro-credentials that would qualify a student for internships.</td>
<td>YR. 3 – 5</td>
<td>WDE, UW, Industry Partners and District Staff</td>
</tr>
</tbody>
</table>

Goal 2: Build capacity in Wyoming to develop high quality stackable CS micro-credentials

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use University of Wyoming postsecondary staff and their graduate students to create high quality micro-credentials focused on CS.</td>
<td>YR. 1 – 5</td>
<td>UW</td>
</tr>
<tr>
<td>Partner with organizations skilled in building stackable micro-credentials, especially CS micro-credentials, to develop a platform for delivering content, submitting evidence and approving and storing micro-credentials.</td>
<td>YR. 1 – 5</td>
<td>WDE, UW, AIR and District Staff</td>
</tr>
</tbody>
</table>

Goal 3: Create incentives for educators to want to earn CS micro-credentials

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
<th>Responsible Party</th>
</tr>
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</table>
Define how the micro-credentials equate to requirements defined by postsecondary institutions | YR. 1 – 2 | WDE, UW

Partner with school districts to develop policies and revise salary schedules to allow micro-credentials to count toward education requirements | YR. 2 – 3 | WDE, District Staff

Goal 4: Allow students who earn CS micro-credentials to receive course credit for the micro-credentials as well.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
<th>Responsible Party</th>
</tr>
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<tbody>
<tr>
<td>Research Wyoming statutes and regulations that may prohibit districts offering credit for courses through competency-based measures</td>
<td>YR. 1</td>
<td>WDE</td>
</tr>
<tr>
<td>Make recommendations to statutes and/or regulations to allow for course credit through competency-based measures</td>
<td>YR. 1 – 2</td>
<td>WDE and District Staff</td>
</tr>
<tr>
<td>Develop guidance for districts on how students can earn course credit through earning CS micro credentials</td>
<td>YR. 2</td>
<td>WDE and District Staff</td>
</tr>
<tr>
<td>Partner with districts to define policies allowing course credit through competency-based measures</td>
<td>YR. 2</td>
<td>WDE and District Staff</td>
</tr>
</tbody>
</table>
One of the key elements of this project is to create a system of stackable micro-credentials that will lead to CS teacher endorsements. Micro-credentials (also referred to as competency-based credentials) allow teachers to earn an endorsement in a way that is job-embedded, less expensive than coursework, and highly accessible. For teachers who have been teaching CS without a CS certification, micro-credentials provide a competency-based pathway that recognizes the teacher’s existing skills and prior experience and do not require the teacher to spend hours in traditional models of professional learning or academic coursework. Additionally, with micro-credentialing teachers can select professional learning opportunities personalized to the specific competencies they still need to develop. The evidence of competency submitted by a teacher may include lesson plans, videos, reflections, analyses of student work, or a combination of these, which are then approved by an evaluator via rubrics. A “stack” (or set) of related micro-credentials can then serve as key or contributing elements to a full endorsement.7

In a policy paper on developing teacher certification pathways,8 the Code.org Advocacy Coalition recommended that states “develop multi-pronged approaches to CS teacher preparation and licensure” (p. 1). State and local education agencies should support the use of micro-credentials as one of these approaches for teachers seeking a CS endorsement. Creating micro-credentials is a modern approach and provides an alternative pathway to the more traditional approach of a time-based credential.

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7 For example, a state may require a combination of a stack of five micro-credentials and a university-based CS teaching methods course.

Additionally, many states are trending away from content exam requirements and toward performance-based assessments.\(^9\) Early research seems to indicate the micro-credential pathway has promise as a practice for teachers to obtain competency-based credentials that are self-directed and self-paced in their pursuit of professional development.

Additionally, the delivery and implementation of the micro-credentials to teachers and students fits with the definition of professional development activities as defined by Perkins. According to definition of professional development provided in the Department of Education’s notice for the Perkins Innovation and Modernization Grant Program, professional development activities should be sustained, intensive, collaborative, job-embedded, data-driven and classroom focused, and to the extent practicable they should be evidence-based (84 \textit{Federal Register} 15199)\(^{10}\). A competency-based credentialing approach provides exactly this type of opportunity to teachers throughout Wyoming and will play an important role in improving 21\textsuperscript{st} century learning opportunities and student outcomes across Wyoming.

Once developed, the micro-credentials will be rolled out through an implementation pilot with three local school districts that represent a cross section of Wyoming’s diverse demographics. The initial pilot has the potential to train160 teachers over the course of two years. Districts have been selected for this pilot based on a combination of need, current engagement with industry, and prior work with personalized learning and innovation. The three districts include:

\(^9\) https://scale.standford.edu/teaching/edtpa
\(^{10}\) Federal Register Vol. 84, No 72 Monday, April 15, 2019.
Uinta County School District #1 – This Southwest Wyoming school district is located in Evanston, Wyoming. Its current population is 11,866 residents. The school district itself serves 2,874 students in grades K-12 and has a professional staff of 215 teachers. Of those students, forty-five percent come from low income families; six percent are English Language Learners; and thirteen percent are on IEPs. One thousand four hundred and sixty-one students are served at the secondary level.

Carbon County School District #1 – This Southcentral Wyoming school district is located in Rawlins, Wyoming. Its current population is 8,858 residents. The school district serves 1,762 students in grades K-12 and has a professional staff of 142 teachers. Of those students, thirty-nine percent are from low income families; five percent are English Language Learners; and fourteen percent are on IEPs. Four hundred and fifty-eight students are served at the secondary level.

Fremont County School District #14 – This is a public-school district located in Ethete, Wyoming, which is located on the Wind River Indian Reservation in Central Wyoming. The school district serves 621 students in grades K-12 and has a professional staff of 62 teachers. Ninety-eight percent of the district’s students are Native American (from both the Northern Arapaho and Eastern Shoshone tribes); eighty-two percent come from low income families; and fifteen percent are on IEPs. Three hundred and thirteen students are served at the secondary level.

Using the lessons learned from the pilot, the WDE will make appropriate adjustments to the model thereby allowing for the implementation of the project statewide.
EXPECTED OUTCOMES

The rationale for this project builds upon the contributions of Wyoming’s Computer Science Standards Review Committee (CSSRC). The committee’s vision is that every student in every school has the opportunity to learn CS. Computing is fundamental to understanding and participating in an increasingly technological society, and it is essential for every Wyoming student to learn as part of a modern education. CS is a subject that provides students with a critical lens for interpreting the world around them and challenges them to explore how computing and technology can expand Wyoming’s impact on the world. The proposed standards provide the necessary foundation for local school district decisions about curriculum, assessment, and instruction. Implementation of these standards will better prepare Wyoming high school graduates for the rigors of college and/or career. In turn, Wyoming employers will be able to hire workers with a strong foundation in CS—both in specific content areas and in critical thinking and inquiry-based problem solving (WY CSSRC, 2019)11.

This project will impact students and teachers in a variety of ways. What follows is a list of intended outcomes for students and teachers.

It is expected that students will:

- Earn course credit in CS,
- Increase their knowledge of CS,
- Increase their skills in CS,

---

• Develop relationships with industry and a better understanding of work opportunities, and
• Get CS-related internships.

It is expected that teachers will:

• Earn a CS endorsement,
• Increase their content knowledge of CS,
• Increase their pedagogical knowledge in CS,
• Increase their skills in CS, and
• Increase their self-efficacy surrounding CS.

In addition to a wealth of research-based information regarding the effect and the efficacy of this project, the Wyoming Department of Education expects to see an:

• Increase in percentage of secondary students who are CTE participants in CS,
• Increase in percentage of secondary students who are CTE concentrators in CS,
• Increase in percentage of secondary students who are CTE completers in CS,
• Increase in the percentage of CTE Concentrators who graduate from high school, as measured by the four-year adjusted cohort graduation rate,
• Increase in the percentage of CTE Concentrators who graduate from high school, as measured by the extended-year adjusted cohort graduation rate
• Increase in proficiency on the appropriate Technical Skills Attainment Assessment (TSAA) by CTE Concentrators, and an
• Increase in percentage of CTE Concentrators graduating from high school having attained a Recognized Postsecondary Credential
QUALITY OF THE PROJECT DESIGN

The WDE has designed a comprehensive plan to address all grant priorities and is prepared with its partners to fully implement outlined activities. The project was initiated to integrate and improve CS (CS) instruction and opportunities for secondary students in Wyoming.

**Absolute Priority – Plan for Evidence Based Field Initiated Innovations**

The micro-credentialing project as described in this proposal meets the Absolute Priority criteria. The project was designed as an effort to expand, develop and implement a program to increase the opportunity for students to take rigorous courses in coding or CS subject areas, and support for statewide efforts to increase access and implementation of coding or CS courses in order to meet local labor market needs in occupation that require skills in those subject areas (Section 114 (e) (7) Perkins V). The Project is also designed to improve CTE outcomes of students throughout the state by supporting the development and enhancement of innovative delivery models for CTE. For districts throughout Wyoming the project creates and expands recruitment, retention, and professional development activities for educators in CS by providing resources and training to improve instruction, opportunities for industry certification, integration of curricula and pedagogical strategies, and resources and assistance with meeting State teacher licensure and credentialing requirements. A detailed description of the key goals and activities can be found in the proposal on pages 9 – 13: GOALS AND ACTIVITIES.
The need for the project, activities, outputs and outcomes has been described throughout this proposal, and are illustrated in the project’s Logic Model which can be found in Appendix E and further explained in the project evaluation section.

**Competitive Preference Priority 1 – Promoting STEM Education and Computer Science Education.**

The micro-credentialing project as proposed meets Competitive Preference Priority 1. The project is designed to create a community of learners in CS and computational thinking. Providing educators with the opportunity to obtain expanded knowledge and skills will directly improve the instruction provided to students and will lead to improved outcomes in STEM and CS. The innovation of the micro-credentialing project as proposed allows students to have access to the same high-quality coursework and provides access to industry internships and industry recognized certification.

**Competitive Preference Priority 2 – Service Students from Low-Income Families**

The project meets competitive Priority 2. The rural nature of Wyoming puts additional stress on low income families. Additionally, as a state dependent upon natural resources as a primary source of industry, the boom and bust nature of the economy can put additional stress on families. The project as proposed is designed to be piloted in three districts which all have a significant number of low-income families. See the table below for the percentage of Free and Reduced Lunch by enrollment for each of the three pilot districts (WDE Federal Free and Reduced Lunch Report, 2018-19).
<table>
<thead>
<tr>
<th>District</th>
<th>Percentage of Free &amp; Reduced Lunch by Enrollment</th>
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</thead>
<tbody>
<tr>
<td>Carbon County School District #1</td>
<td>38.5%</td>
</tr>
<tr>
<td>Fremont County School District #14</td>
<td>100%</td>
</tr>
<tr>
<td>Uinta County School District #1</td>
<td>43.44%</td>
</tr>
</tbody>
</table>

All three districts fall over the state average (36.42%). The project activities will provide opportunities regardless of location or income to students and teachers to have access to high quality CS curricula and industry.

**Competitive Preference Priority – Serving Students from a Qualified Opportunity Zones**

The project meets Competitive Preference Priority 3. All three pilot districts are located in Qualified Opportunity Zones. See Appendix J for the details including the census tract number and county. The micro-credentialing project will promote economic mobility by providing access to high quality CS professional development and curricula which can be made available to all students either during school or on a student’s own time. Students will also have access to highly skilled teachers.

**ADEQUACY OF THE SUPPORT OF THE LEAD AGENCY**

The Wyoming Department of Education (WDE) is the state education agency in Wyoming and has highly qualified teams and staff dedicated to CS, career technical education, and personalized learning. CS education is a designated priority focus area by both the Wyoming Legislature and State Superintendent of Public Instruction, which allows for significant resources to be allocated to support school districts as they ramp up to be able to effectively teach high quality CS courses throughout the K-12 system,
and especially in the secondary school setting. In the Title II Needs Assessment completed by school districts, the highest priority districts had was professional development to build skills and endorsements for CS teachers. The WDE Leadership is adjusting and reassigning other work to enable sufficient time and resources to ensure the success of this project. Additional as noted in the budget narrative, the WDE is allocating significant funds from Perkins, Title II, and Title IVA to provide the additional resources needed to effectively and successfully complete all grant activities.

COMMITMENT OF PARTNERS:

The Professional Teaching Standards Board (PTSB) is an independent professional licensing board that governs teacher licensure in the state of Wyoming. PTSB is responsible for evaluating the credentials of both current and prospective educators to ensure that all students are served by competent and ethical educators. Licenses are issued based on review and verification of applicants’ preparation and continuing professional development. The board has been actively working to find a variety of high-quality and innovative endorsement options for educators in CS and other hard to hire areas in education.

The University of Wyoming (UW) is the only public four-year institution in the state. As part of its commitment to the project, UW will provide two graduate students who will assist in the identification of competencies associated with each micro-credential; develop corresponding course work; and create scoring rubrics for each micro-credential. The University will participate on the Boot Up Wyoming leadership team and play a key role in the success of the project.
American Institutes for Research (AIR) has shared its expertise with the WDE in designing the early stages of the *Boot Up Wyoming* micro-credentialing project. It will continue to provide lessons learned during the initial roll out of the pilot portion of the project, provide written feedback on the design of each micro-credential, and will serve as a member of the advisory board. Additionally, AIR will attend up to two yearly in-person strategic advisory board meetings in Cheyenne.

**Wyoming Workforce Development Council (WWDC)** A representative from WWDC will serve on the leadership team and provide insights and trends on the needs of Wyoming’s evolving workforce needs. This will assist with making sure students have both appropriate and adequate preparation to participate in work-based learning experiences. The WWDC is also researching to determine how they can financial support this effort through their Workforce Innovation and Opportunity (WIOA) funds.

**PROJECT LEADERSHIP TEAM**
PERKINS INNOVATION AND MODERNIZATION GRANT ADVISORY BOARD

The Perkins Innovation and Modernization (I & M) Advisory Board will convene virtually every three months over the life of the project, once in each quarter of the project year. Before each virtual board meeting, the project leadership will draft and submit an agenda and supporting materials (e.g., status updates, formative feedback, and research instruments) for the board to review. The initial board meeting will focus on relationship and context building toward the start of the project as well as establishing norms and procedures for engaging the board throughout the duration of the project. At subsequent meetings, the I&M Advisory Board will receive updates highlighting what has been learned since the last board meeting. In addition, during the spring and fall of each project year, the WDE and PTSB senior leadership will meet one-on-one virtually with each board member for an hour to provide formative updates and receive feedback. Specifically, the board will serve in the following three functions related to the project:

1. Recommend evidenced-based adjustments to project plans. The advisory board will be involved in giving feedback on the theoretical framework, data collection and analysis, and program refinement;

2. Assess whether the project is making satisfactory progress toward its goals. Advisory board members will provide written feedback on the project team’s progress toward goals; and

3. Attest to the integrity of outcomes reported by the project.
The advisory group will review the annual and final reports and provide written feedback on the quality and integrity of findings and reported outcomes. This feedback will be included in the appendix of the report for submission to the NSF program officer. An advisory board consisting of experts will ensure that the project is making progress toward achieving its objectives. The expertise of advisory board members as described below will complement that of the leadership team.
ADEQUACY OF THE BUDGET

Project *Boot Up Wyoming* is strategically positioned to take advantage of significant WDE resources and support. Key WDE divisions and partners, as described throughout this proposal, support this project. This support streamlines the process of piloting a model of micro-credentials for teachers and students, ultimately addressing the urgent need the State has to effectively and efficiently support districts with the implementation of the legislated CS standards.

The WDE has agreed to provide a significant financial commitment to *Boot Up Wyoming*, including surpassing the required non-federal matching funds. The WDE will contribute $208,405.89 in non-federal matching funds and each of the three Consortium Districts will contribute another $15,000 per district in non-federal matching funds.
Making a total contribution of $253,405.89 in non-federal matching funds. This level of commitment to this project is because WDE and the Consortium Districts recognize: 1) the need to support a community of teacher learners, 2) the requirement to advance the CS capacity of teachers and students, and 3) the critical need to develop a research-based credentialing model that can be used now as well as statewide in the future. Based on the support from partners and the additional WDE resources and financial commitment, the funds requested are adequate for implementing Boot Up Wyoming.

REASONABLENESS OF THE BUDGET

The WDE is requesting $489,715.35 for years one, two and three of this project. This amount, in addition to the required non-federal match, is adequate to implement the activities as described in the proposal. The Budget Application and Narrative detail the breakdown of the costs by expense category and provide the justification of costs. Additional funding for years four and five are described and supported in the Budget Narrative.

SUSTAINABILITY BEYOND INNOVATION GRANT FUNDING

Given the significant amount of federal and non-federal dollars the WDE and its partners are using to support the full scope of this work, the agency intends to continue to designate time and resources to sustain and expand Boot Up Wyoming in the long term. WDE will also be working with postsecondary institutions to develop a long-term sustainability model for the management and scoring of CS micro-credentials.
QUALITY OF PROJECT EVALUATION

The evaluation will provide objective measures of the extent to which the project achieves its ultimate vision: (1) teachers have the skills, incentives, and resources needed to successfully teach CS at the secondary level through the development and deployment of CS micro-credentials; and (2) students will acquire CS knowledge and skills and develop relationships with industry that will lead to internships and an understanding of job opportunities.

The evaluation will examine the extent to which the targeted activities and outcomes as specified in the Project Goals, Activities, and Timeline Table (Pages 9 – 13) are met. More specifically, the evaluation will determine (1) the extent to which project outputs have been met, that is whether the activities are successfully carried out and (2) the extent to which the project outcomes related to teachers and students have been achieved. (See the Logic Model in Appendix E). The following is a detailed explanation of the measures and how they will be used to conduct the project evaluation.

(1) The extent to which methods of evaluation include the use of objective Performance Measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data.

The evaluation effort will primarily serve to evaluate current activities and products and inform in a timely and ongoing basis any needed revisions in activities and products. Both quantitative and qualitative data, and formative and summative data, will be collected and regularly reported to key personnel. Attitudinal (e.g., how satisfied are participants and what are their perceptions of various activities), knowledge and skill-based (e.g., how much did participants learn, what skills did participants acquire), and
behavioral (e.g., how have participants changed their behaviors) data will be collected. Evaluation methods will include written questionnaires, interviews, observational tools, performance tasks, and “tracking” systems of teacher and student participants. Data on students’ reading and math achievement, graduation rates, and their post-secondary credentials (i.e., industry certification, dual credits, etc.) will also be collected.

Formative data will be collected on an ongoing basis (e.g., after each micro-credential course) to determine the quality of the activity, aspects that worked well, and areas for improvement. Summary evaluations will be collected annually and used to determine intermediate and long-term impact on students, teachers, and districts.

The evaluator will present formative evaluation data (i.e., the number and quality of project activities that have been carried out to date) to the Project Team three times a year. The Project Team will discuss what activities and processes are working well and what aspects might need to change. When available, summative data on the objectives and outcomes will also be shared. The evaluator will present the evaluation data so that the project can use the evaluation results to examine the project’s implementation strategies and the progress toward achieving intended outcomes and to make adjustments accordingly.

The summative evaluation will be written in August of each year. The summative evaluation report will include information on how the grant funds were used year-to-date and on the progress of the performance and project-specific measures. When feasible, performance and project measures will be disaggregated by subgroups and special populations (e.g., race/ethnicity, English Learner status, free and reduced lunch status, disability status, and foster status). In addition, given that males are more likely to be
involved in STEM classes, results will be disaggregated by gender as well. The information will be provided in a timely manner for the annual report requirement for this Perkins Grant.

The general evaluation model that WDE will follow is based on the University of Wisconsin Extension Office’s logic model (2003). A logic model describes the inputs, outputs, and outcomes of a program. The evaluation plan will flow from this logic model. The evaluation component of the logic model identifies the critical questions that should be asked about the inputs, outputs, and outcomes; identifies the indicators that will be used to answer these questions; and specifies the sources and methods that will be used to collect the data. See Appendix E for the Project’s logic model.

The proposed evaluation plan will measure the project outcomes as outlined in the EXPECTED OUTCOMES (Page 17-18). The evaluation plan will be further refined by the evaluator and the Project Team as the various components of the project are implemented. The evaluation is also designed to measure the impact the micro-credentialing process has had on (1) teachers’ CS knowledge, skills, and self-efficacy, and their CS teaching practices and on (2) students’ CS knowledge and skills and their CS job opportunities (3) the percentage of teachers earning the CS micro-credential badge, (4) the percentage of students participating in the micro-credential process and as a result becoming CTE participants, concentrators, and completers, and (5), long-term the project’s impact on students’ math achievement proficiency rates, graduation rates, and their subsequent CS credentials in post-secondary institutions.

To best determine the impact of the CS micro-credential project on teachers and on students, WDE will examine results on the “intervention” sample (the project’s three pilot
districts) and a “comparison” sample of districts. The comparison sample will be 3-5 similar districts to the three pilot districts based on size, demographics (race/ethnicity, FRL), economics and job opportunities (e.g., Industry: technology, mining, coal), and current involvement in the CS CTE cluster. For example, given that one of the pilot districts is on a Native American reservation, two of the comparison districts will be two other districts on the Native American reservations. Measures on CTE participation rates, math achievement, CS TSA proficiency, and unemployment rates will be examined to establish baseline equivalence. Equivalence of the intervention and comparison districts will be examined at year 1 and subsequent years to ensure their equivalence. Once the micro-credential course is implemented, teacher turnover and student attrition/joining in the CS micro-credential program will be examined and considered in any analyses. Outcome measures will be examined by the intervention/comparison districts. An appropriate t-test with corrections for running multiple tests will be used. The outcome measures for teachers and students will be examined across districts as well as by individual district.

The first year will be a development year, and so outcome results by teacher and student will not be conducted during this year. The evaluation during the first year will mainly consist of tracking activity completion, the timeliness of activity completion, and having content experts review the quality of the outputs (courses, course alignment with standards, and scoring rubric). However, even though the first year is a development year, information on the CS CTE participation and concentrator rates will continue to be collected for all Wyoming districts.
The micro-credential will consist of a skill or set of skills. Each micro-credential will have its own performance based-task and accompanying scoring rubric. These performance tasks will allow teachers/students to demonstrate their level of competence on the targeted skills. For teachers, the micro-credentials will cover both content and pedagogy. These knowledge tests and performance tasks will be used in the evaluation. In addition, after each micro-credential, an online questionnaire (the End-of-Training Questionnaire) that asks for feedback on the quality of the micro-credential, whether participants liked it, how useful they perceived it to be, and what recommendations they have for improvement will be collected.

The End-of-Training Questionnaire completed by both teachers and students will provide feedback on the perceived quality of the micro-credential. This will be collected on an ongoing basis and will be analyzed in real-time so feedback will be timely. In addition, the content analysis during Year 1 by content experts will provide high quality feedback on the micro-credential courses. Feedback on teacher and student performance in the courses will be analyzed in real-time. Lastly, data on teacher and student course completion rates will be examined twice a year.

(2) The extent to which the evaluation will provide guidance about effective strategies suitable for replication or testing in other settings.

Given that the three pilot districts represent different types of districts, including one Native American district, the pilot will provide information on how generalizable the results are to different districts. The three pilots are not three “like” districts or even “ideal” districts. They each have strengths and weaknesses where this project is concerned and thus be a good test to see the replicability of the project.
Other Attachment File(s)

* Mandatory Other Attachment Filename: 1234-Appendix A.pdf

Add Mandatory Other Attachment  Delete Mandatory Other Attachment  View Mandatory Other Attachment

To add more “Other Attachment” attachments, please use the attachment buttons below.

Add Optional Other Attachment  Delete Optional Other Attachment  View Optional Other Attachment
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Appendix A

Signed Consortium Agreement
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Appendix B

Individual Resumes for Project Director and Key Personnel
Assurance Regarding Application Requirement (g)

The WDE and school districts who are part of the consortium have agreed to assure to provide the following data and information:

1) Provide information to the Secretary, as requested, for evaluations that the Secretary may carry out; and


These assurances are included in the signed consortium agreements as well.
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Appendix C
Letters of Commitment from Project Partners
Perkins Innovation and Modernization Grant

Appendix D

Documentation of Rural Eligibility and List of Rural Locale Codes
School District Rural Local Codes

<table>
<thead>
<tr>
<th>School District</th>
<th>Rural Locale Code</th>
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<tbody>
<tr>
<td>Carbon County School District #1</td>
<td>33</td>
</tr>
<tr>
<td>Fremont County School District #14</td>
<td>42</td>
</tr>
<tr>
<td>Uinta County School District #1</td>
<td>33</td>
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</table>
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Appendix E

Logic Model
### Current Situation & Needs

- Wyoming needs to recruit, develop, and retain secondary teachers who can teach CS concepts.
- Many secondary educators have low levels of baseline knowledge about and self-efficacy in CS.
- Wyoming secondary educators are seeking alternative paths to earning a CS endorsement.
- Wyoming has limited capacity to build and offer CS micro-credentials.
- School districts need high quality CS curricular resources that educators are comfortable teaching.
- Students need additional pathways to earn industry recognized credentials.

### Project Activities

- Define skills and identify competencies required to effectively teach CS.
- Assemble and align competencies with educator endorsement and industry certification requirements.
- Partner with CS field experts to assist postsecondary institutions in defining and developing high quality CS micro-credentials.
- Design and pilot course content to support knowledge and skill acquisition needed to earn micro-credentials.
- Develop policies and salary schedules that account for teachers earning micro-credentials.
- Develop policies to allow student earned micro-credentials to count toward course credit and industry certification.

### Project Outputs

- Stackable high quality CS micro-credentials aligned with Wyoming content standards.
- Stackable CS micro-credentials that allow educators to receive CS endorsement and students to receive industry recognized certification.
- District salary schedules give educators credit for earning CS micro-credentials.
- Students earn course credit for showing competencies in CS skills.
- Students qualify for internships by demonstrating competencies in CS skills.
- Students earn industry-recognized certifications through stackable CS micro-credentials.
- Number of Students and Teachers accessing the microcredentials.

### Project Outcomes

- Secondary students CS knowledge and skills increase.
- Teacher CS content and pedagogical knowledge increases.
- Teacher self-efficacy in CS education increases.
- Educators earn the computer science endorsement through the stackable microcredentials pathway.
- Secondary students show competencies in CS skills that are valued by industry.
- Students develop relationships with industry and gain a better understanding of work opportunities and access to internships.
- Districts and educators feel invested in the CS reform.
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Appendix F

Letter of Assurance For Meeting the

Matching Requirement
June 10, 2019

Dear Sir or Madam,

The partners in the consortium, Wyoming Department of Education (WDE), Carbon County School District #1, Fremont County School District #14, and Uinta County School District #1, have all agreed in the consortium agreement to provide matching funds. Each school district will be providing a lead representative who will be allocating 4% of their time to the project over the next four years. This equates to $5,000 per year or $15,000 over three years. The districts have agreed to provide another $5,000 of in-kind for contribution in each of Year 4 and Year 5 of the grant if the additional funds are provided for this grant.

The WDE has also agreed to provide in-kind contribution of $208,405.89. This match comes from the time and effort that will be provided by WDE’s key personnel supporting the work of this grant. The WDE also agrees to provide matching funds in Year 4 and Year 5 of the grant. Each of those years, WDE will provide an in-kind contribution of staff time of $69,468.63.

Sincerely,

Laurel Ballard, Ph.D.
Perkins Innovation and Modernization Grant

Appendix G

Current Indirect Cost Agreement
The approved indirect cost rates herein are for use on grants, contracts, and other agreements with the Federal Government. The rates are subject to the conditions included in Section II of this Agreement and regulations issued by the Office of Management and Budget (OMB) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards under 2 CFR 200.

**Section I - Rates and Bases**

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<tr>
<th>Type</th>
<th>From</th>
<th>To</th>
<th>Rate</th>
<th>Base</th>
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<td>MTDC</td>
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</table>

**Distribution Base:**

MTDC Modified Total Direct Cost - Total direct costs excluding equipment, capital expenditures, participant support costs, pass-through funds and the portion of each subaward (subcontract or subgrant) above $25,000 (each award; each year).

**Applicable To:**

APwR The rates herein are applicable to All Programs including those that require restricted rate per 34 CFR 75.563 and 34 CFR 76.563.

Unrestricted Unrestricted rates apply to programs that do not require a restricted rate per 34 CFR 75.563 and 34 CFR 76.563.

Restricted Restricted rates apply to programs that require a restricted rate per 34 CFR 75.563 and 34 CFR 76.563.

**Treatment of Fringe Benefits:**

Fringe benefits applicable to direct salaries and wages are treated as direct costs. Pursuant to 2 CFR 200.431, (b), (3), Paragraph (i), unused leave costs for all employees are allowable in the year of payment. The treatment of unused leave costs should be allocated as an indirect cost except for those employee salaries designated as a direct cost for the restricted rate calculation.

**Capitalization Policy:** Items of equipment are capitalized and depreciated if the initial acquisition cost is equal to or greater than $5,000.
obligations of the Organization and allowable under the governing cost principles; (B) the same costs that have been treated as indirect costs are not claimed as direct costs; (C) that similar types of information which are provided by the Organization, and which were used as a basis for acceptance of rates agreed to herein, are not subsequently found to be materially incomplete or inaccurate; and (D) that similar types of costs have been accorded consistent accounting treatment.

Accounting Changes: The rates contained in this agreement are based on the organizational structure and the accounting systems in effect at the time the proposal was submitted. Changes in organizational structure or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rates in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.

Provisional/Final/Predetermined Rates: A proposal to establish a final rate must be submitted. The awarding office should be notified if the final rate is different from the provisional rate so that appropriate adjustments to billings and charges may be made. Predetermined rates are not subject to adjustment.

Fixed Rate: The negotiated fixed rate is based on an estimate of the costs that will be incurred during the period to which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to a subsequent rate calculation to compensate for the difference between the costs used to establish the fixed rate and the actual costs.

Notification to Other Federal Agencies: Copies of this document may be provided to other Federal agencies as a means of notifying them of the agreement contained herein.

Audit: All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based may be compensated for in a subsequent negotiation.

Reimbursement Ceilings/Limitations on Rates: Awards that include ceiling provisions and statutory-regulatory requirements on indirect cost rates or reimbursement amounts are subject to the stipulations in the grant or contract agreements. If a ceiling is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.
Submission of Proposals: New indirect cost proposals are necessary to obtain approved indirect cost rates for future fiscal years. The next indirect cost rate proposal is due six months prior to the expiration dates of the rates in this agreement.

Section IV - Approvals

For the State Education Agency:

Wyoming Department of Education
2300 Capitol Avenue, Hathaway Building,
2nd Floor
Cheyenne, WY 82002-0050

Diane Bailey

For the Federal Government:

U.S. Department of Education
OCFO / FIO / ICG
550 12th Street, SW
Washington, DC 20202-4450

Fran Outland

Name
Date: 7/6/2017
Title: CFO - WY Dept of Ed

Negotiator: Damien Williams
Telephone Number: (202) 245-2230

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Perkins Innovation and Modernization Grant

Appendix F

Assurance Regarding Application Requirement (g)
Assurance Regarding Application Requirement (g)

The WDE and school districts who are part of the consortium have agreed to assure to provide the following data and information:

1) Provide information to the Secretary, as requested, for evaluations that the Secretary may carry out; and


These assurances are included in the signed consortium agreements as well.
Perkins Innovation and Modernization Grant

Appendix J

Wyoming Opportunity Zones
<table>
<thead>
<tr>
<th>Wyoming</th>
<th>City</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyoming</td>
<td>Laramie</td>
<td>56001963700 – S &amp; E Laramie</td>
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<td>56007967700 – Rawlins</td>
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<td>Converse</td>
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<td>56015957800 – Torrington</td>
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<td>Worland</td>
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Budget Narrative File(s)

*Mandatory Budget Narrative Filename: 1247-Budget Narrative Final.pdf

Add Mandatory Budget Narrative  Delete Mandatory Budget Narrative  View Mandatory Budget Narrative

To add more Budget Narrative attachments, please use the attachment buttons below.

Add Optional Budget Narrative  Delete Optional Budget Narrative  View Optional Budget Narrative
Perkins Innovation and Modernization Grant

Budget Narrative
BUDGET NARRATIVE

The Wyoming Department of Education (WDE) is requesting a total of $489,715.35 for the first three years of the grant, and $879,092.25 over all five years in support of the Boot Up Wyoming computer science micro-credential project. The requested amount reflects only a portion of the scope of the project. Given the significance of this work to prepare students for the future workforce, the WDE will make a substantial in-kind contribution to Boot Up Wyoming through the support of personnel time that will be dedicated to the proposed project. Between all project partners a total of $562,098.09 is being committed through in-kind contributions over the five years. Additionally, the WDE is committing $1,856,612.38 over the five years using a combination of Title IIA, Title IVA, and Perkins funds. This brings the total cost of the project over 5 years to $2,989,110.52.

Since Boot Up Wyoming is part of a comprehensive plan to assist districts in implementing recently legislated computer science standards aimed at providing a rich 21st century learning experience for all students, many WDE staff will be contributing to the overall success of the project. The following summaries are provided to assist with understanding the line item budget request.

BUDGET SUMMARY GRANT FUNDS REQUESTED (YRS. 1 – 3)

PERSONNEL & FRINGE

State Standards Content Expert ($8,645.00 Annually): This WDE staff person will devote .05 FTE to the project each year, which equals $8,645.00 in Years 1, 2 and 3 each. They will be responsible for assisting educators in unpacking the CS Standards
to identify skill-based competencies and design professional development around CS standards implementation.

**CONTRACTUAL**

**University of Wyoming ($33,000.00 Annually):** The WDE will contract with UW for two graduate students to support and develop stackable micro-credentials and corresponding course material in Years 1, 2 and 3. The grant would support one of the two graduate students in each of these years.

**District Staff ($8,750.00 Annually):** The WDE will contract with selected district staff to assist with the design of the micro-credentials and corresponding course professional development in Years 1, 2 and 3. A total of five teachers would be selected to assist with this portion of the project and each teacher would receive $3,500.00 for a total cost of $17,500.00. The grant would pay for half of this expense in Years 1, 2 and 3.

**University of Wyoming and Wyoming Community Colleges ($20,000 Annually):** The WDE will contract with Institutes of Higher Ed (IHE), including the University of Wyoming and other Wyoming Community Colleges to score and issue the micro-credentials to teachers and students in Year 2 and 3. The cost estimate is based on 80 teachers achieving 5 micro-credentials per year and $100 fee for scoring each micro-credential. The grant would support half of the total cost of $40,000 for scoring the micro-credentials.

**OTHER**

**Teacher Stipends ($100,000.00 Annually):** The WDE will provide a stipend for every micro-credential a teacher completes during Years 2 and 3. An estimate of 40 teacher
completers was used as a basis for the calculation. The total amount assumes each of the 40 teachers would complete 10 micro-credentials at a cost of $250 per credential. The grant would support half of the overall cost of $200,000 per year.

Implementation Support ($25,000.00 Annually): District mentors will be assigned to support at least four teachers with the implementation of the skills gained in obtaining CS micro-credentials. Mentor and Mentee teachers will be selected based on geography. The expectation is for each Mentee teacher to receive 9 hours of mentoring per school semester. A total of 10 mentors will be identified and receive a $5000.00 stipend each year. The grant would pay for half of the $50,000 annual stipend. This support will occur in Years 2 and 3.

INDIRECT RATE:

The Wyoming Department of Education has a negotiated 11% indirect cost rate for federal grants. The current indirect cost rate agreement is located in Appendix G.

MATCHING NON-FEDERAL FUNDS (YRS 1 – 3).

PERSONNEL AND FRINGE
ADDITIONAL AGENCY FUNDS CONTRIBUTING TO THE PROJECT

The overall budget to implement the *Boot Up Wyoming* project is significantly more than what is requested and attributed to the grant application. This is important as it represents the breadth of the commitment WDE and its partners have to ensuring the successful implementation of the project. Below is a description of other costs associated with the project and funded directly by WDE through the agency’s federal funding sources including Title IIA, Title IVA and Perkins.

**ADVISORY SUPPORT ($25,000.00 Annually) American Institutes Research (AIR):**
AIR has extensive expertise in both computer science mcir-credentialing and personalized learning. They have three major responsibilities: 1) Attend monthly, virtual
60-min strategic advisory board meetings; 2) Attend 1-2 yearly in-person advisory board meetings in Cheyenne; and 3) Provide written feedback through a virtual platform (like Google Docs) on the design of each micro-credential.

**EXTERNAL EVALUATION ($100,000 Annually):** The WDE will contract and conduct an external evaluation of all activities in the *Boot Up Wyoming* Project. The evaluation cost has been estimated at $100,000 in Years 1, 2 and 3.

**TRAVEL ($30,000.00 Annually):** The WDE will pay for travel to conduct district visits and for advisory board members to attend required board meetings.

**CONTRACTUAL**

**University of Wyoming ($33,000.00 Annually):** The WDE will contract with UW for two graduate students to support and develop stackable micro-credentials and corresponding course material in Years 1, 2 and 3. The WDE would support one of the two graduate students in each of these years.

**District Staff ($8,750.00 Annually):** The WDE will contract with selected district staff to assist with the design of the micro-credentials and corresponding course professional development in Years 1, 2 and 3. A total of five teachers would be selected to assist with this portion of the project and each teacher would receive $3,500.00 for a total cost of $17,500.00. The WDE would pay for half of this expense in Years 1, 2 and 3.

**University of Wyoming and Wyoming Community Colleges ($20,000 Annually)** The WDE will contract with Institutes of Higher Ed (IHE), including the University of Wyoming and other Wyoming Community Colleges to score and issue the micro-credentials to teachers and students in Year 2 and 3. The cost estimate is based on 80
teachers achieving 5 micro-credentials per year and $100 fee for scoring each micro-credential. The WDE would support half of the total cost of $40,000 for scoring the micro-credentials.

**Teacher Stipends ($100,000.00 Annually):** The WDE will provide a stipend for every micro-credential a teacher completes during Year 2 and 3. An estimate of 40 teacher completers was used as a basis for the calculation. The total amount assumes each of the 40 teachers would complete 10 micro-credentials at a cost of $250 per credential. The WDE would support half of the overall cost of $200,000 per year.

**Implementation Support ($25,000.00 Annually):** District mentors will be assigned to support at least four teachers with the implementation of the skills gained in obtaining CS micro-credentials. Mentor and Mentee teachers will be selected based on geography. The expectation is for each Mentee teacher to receive 9 hours of mentoring per school semester. A total of 10 mentors will be identified and receive a $5000.00 stipend each year. The WDE would pay for half of the $50,000 annual stipend. This support will occur in Years 2 and 3.

**TECHNOLOGY: ($200,000 Yr. 1/ $40,000 Annually in Yr. 2 and 3):** The WDE would seek a contract to develop a framework and system to maintain and manage the development and approval of micro-credentials.

**MATERIALS ($5,000 Annually):** The WDE will use these funds for meeting materials and collateral associated with this project.

**ADDITIONAL GRANT FUNDS REQUESTED FOR YEARS 4 and 5**
PERSONNEL & FRINGE

State Standards Content Expert ($8,645.00 Annually): This WDE staff person will devote .05 FTE to the project each year, which equals $8,645.00 in Years 4 and 5 each. They will be responsible for assisting educators in unpacking the CS Standards to identify skill-based competencies and design professional development around CS standards implementation.

CONTRACTUAL

University of Wyoming ($33,000.00 Annually): The WDE will contract with UW for two graduate students to support and develop stackable micro-credentials and corresponding course material in Years 4 and 5. The grant would support one of the two graduate students in each of these years. The focus in Years 4 and 5 would turn to refinement of credentials and courses for Students.

District Staff ($8,750.00 Annually): The WDE will contract with selected district staff to assist with the design of the micro-credentials and corresponding course professional development in Years 4 and 5. A total of five teachers would be selected to assist with this portion of the project and each teacher would receive $3,500.00 for a total cost of $17,500.00. The grant would pay for half of this expense in Years 4 and 5. The focus in Years 4 and 5 would turn to refinement of credentials and courses for Students.

University of Wyoming and Wyoming Community Colleges ($50,000 Annually) The WDE will contract with Institutes of Higher Ed (IHE), including the University of Wyoming and other Wyoming Community Colleges to score and issue the micro-credentials to teachers and students in Year 4 and 5. The cost estimate is based on 100 students and teachers achieving 10 micro-credentials per year and $100 fee for
scoring each micro-credential. The grant would support half of the total cost of $100,000 for scoring each micro-credential.

OTHER

Teacher Stipends ($50,000.00 Annually): The WDE will provide a stipend for teachers as the focus transitions to planning to prepare students for earning micro-credentials during Years 4 and 5. The grant would support half of the overall cost of $100,000 per year.

Implementation Support ($25,000.00 Annually): District mentors will be assigned to support at least four teachers with the implementation of the skills gained in obtaining CS micro-credentials and instructing students on obtaining micro-credentials. Mentor and Mentee teachers will be selected based on geography. The expectation is for each Mentee teacher to receive 9 hours of mentoring per school semester. A total of 10 mentors will be identified and receive a $5000.00 stipend each year. The grant would pay for half of the $50,000 annual stipend. This support will continue in Years 4 and 5.