INDIANA COMMISSION *for*
HIGHER EDUCATION

2017 Indiana STEM Teacher Recruitment Fund Grant

Application and program administered by:

Indiana Commission for Higher Education

101 West Ohio Street, Suite 300

Indianapolis, IN 46204

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I. Timeline

Monday, May 22, 2017	Application posted on Indiana Commission for Higher Education website at www.in.gov/che
Friday, June 30, 2017	Applications due at CHE by 5pm (Eastern)
Monday, July 3, 2017 - Friday, July 14, 2017	Application review period
Week of July 17, 2017	Applicants notified of status, grants awarded

The Grant Period is July 1, 2017 through June 30, 2019. Costs incurred from July 1, 2017 until the date of grant awarding may be invoiced. Prior to July 1, 2018, CHE will pay no more than 50% of a grant recipient's total award as listed in the 'Grant Award Information' section of the executed Grant Award Agreement.

Applications may be submitted by postal mail to:

Indiana Commission for Higher Education

ATTN: STEM Teacher Recruitment Grant Fund

101 West Ohio Street, Suite 300

Indianapolis, IN 46204

Alternatively, applications can be submitted by email to the program contact or by fax at (317) 232-3260.

Program Contact:

Eugene Johnson, Assistant Commissioner
Indiana Commission for Higher Education
101 West Ohio, Suite 300
Indianapolis, IN 46204
Email: ejohnson@che.in.gov
Alternate Email: finance@che.in.gov
Phone: (317) 232-2368

II. Background

The Indiana STEM Teacher Recruitment Fund was initially established by the Indiana General Assembly during the 2013 Legislative Session. The fund was established to:

- Encourage the growth of existing organizations that recruit science, technology, engineering and mathematics teachers.

- Support the establishment of programs that increase the pool of high-quality science, technology, engineering and mathematics teachers in Indiana.

- Identify recruiting organizations and programs that:
    - Produce high student achievement and effective and highly effective teachers
    - Match science, technology, engineering and mathematics teachers with school corporations that are encountering shortages of qualified teachers in those fields.
    - Place new science, technology, engineering and math teachers in schools located in underserved areas.

III. Objectives

To provide grants to Indiana non-profit organizations[1] and programs[2] which: a) recruit and place science, technology, engineering and mathematics teachers in Indiana school corporations located in underserved areas or who are encountering a shortage of qualified teachers in those fields and/or b) establish programs that increase the pool of high-quality science, technology, engineering and mathematics teachers in Indiana. To be considered for a grant, organizations and programs must demonstrate prior success in recruitment, development, licensure or permitting of highly effective STEM teachers and high student achievement or must provide a plan/framework that will accomplish these goals. Organizations and programs must match STEM teachers with Indiana school corporations that would otherwise encounter a shortage of qualified teachers in K-12 science, technology, engineering and mathematics. Grants may be used to recruit, train and place new STEM teachers and to provide pre-service and in-service teachers with skills to teach new or additional STEM coursework.

"New STEM teacher" means an individual who meets at least one of the following definitions:

- Has at least a baccalaureate degree from a regionally accredited institution in a STEM field but who has not previously been granted a license or permit to teach a STEM subject or content area in an Indiana public school;
- Is completing a baccalaureate degree from a regionally accredited institution in a STEM field and who also is completing teacher licensing requirements in a STEM subject or content area;
- Has work experience in a STEM field but who has not previously been licensed to teach a STEM subject or content area in an Indiana public school;
- Is licensed to teach in an Indiana public school and becomes licensed to teach a STEM subject or content area

"Pre-service teacher" means an individual who:

- Is engaged in training designed to train them to become an effective STEM teacher; and
- Plans to teach STEM coursework in an Indiana school corporation

"In-service teacher" means an individual who:

- Is currently licensed to teach in an Indiana public school; and

[1] Entities must be registered as a non-profit domestic or foreign corporation with the Indiana Secretary of State.
[2] Same as 2

- Is looking to obtain training to teach in a STEM subject or content area different than their current position or to teach advanced subject or content area within their current position

The term “licensure” includes receiving the following licenses:

- Workplace Specialist license
- Transition to Teaching license
- Charter school license (IC 20-28-5-16)
- Initial, proficient or accomplished practitioner license and the equivalent under prior administrative rules

The term “permit” includes:

- Emergency permit
- Transition to Teaching permit
- An individual eligible to teach in a charter school pursuant to IC 20-24-6-5
- Career Specialist permit

The term “completes training” includes:

- Training provided by organizations specializing in the development of K-12 STEM curricula and courses, including dual credit courses
- Training for online K-12 STEM curricula and courses that utilize a blended instructional model

STEM subjects: Individuals recruited and trained by organizations and programs to be STEM teachers must seek licensure or training in K-12 science, technology, engineering or math subjects or content areas approved by the Indiana State Board of Education. Examples include:

- Elementary science and math
- Middle school science, technology, engineering or math
- High school science, technology, engineering or math
- Certain middle school and high school courses designated as “quantitative reasoning” courses (see appendix E)
- Advanced Placement and International Baccalaureate science, technology, engineering or math courses and other similar advanced courses
- Dual credit science, technology, engineering or math courses listed on the Indiana Core Transfer Library
- Certain career and technical education courses in STEM fields (see appendix F)

A school corporation “encountering a shortage of qualified teachers” must:

- Certify that the school corporation has determined the need to seek an emergency permit for a teacher of a STEM subject or course as designated by 511 IAC 16-4-1; or
- Have a shortage of teachers of a STEM subject or course as determined by the State Board of Education or the school corporation; or
- Have no current employee eligible to teach the STEM subject or course.

An “underserved” Indiana school corporation must:

- Have a complexity index determined by IC 20-43-13 greater than the state average; or
- Must employ a program participant or contract for the services of a program participant to serve predominantly in a Title I school(s).

IV. Entities Eligible to Apply

New and existing organizations or programs may apply for grant consideration. Consideration for a grant will be given to entities that meet one or more of the following criteria:

- Operate programs that successfully recruit, train and place new STEM teachers in grades K-12 in underserved Indiana school corporations or corporations experiencing a shortage of qualified STEM teachers;
- Operate programs which enhance the ability of in-service teachers currently employed in Indiana school corporations to teach STEM-specific coursework;
- Plan to develop and operate new programs designed to place STEM teachers in grades K-12 in underserved Indiana school corporations or school corporations experiencing a shortage of qualified STEM teachers

New[3] organizations or programs are those that have never received the STEM Teacher Recruitment Fund Grant and will establish programs that increase the pool of high-quality science, technology, engineering and mathematics teachers in Indiana.

Existing[4] organizations or programs are those that previously received and utilized a STEM Teacher Recruitment Fund Grant and will continue to recruit and train eligible, new pre-service or in-service science, technology, engineering and mathematics teachers.

Entities must be registered as a non-profit domestic or foreign corporation with the Indiana Secretary of State. Please include a copy of the entities most current organizational chart with all applications.

[3] Indiana Code 21-13-11-9(2)
[4] Indiana Code 21-13-11-9(1)

V. Authorized Activities and Use of Funds

Grant recipients are responsible for complying with Indiana teacher licensure and permit requirements.

Program participants must seek employment in an Indiana public school corporation, including charter schools. Seeking employment in a non-public school or a non-Indiana school corporation does not qualify the program participant to receive program support.

Conditions:

- Individuals who accept program financial support to become licensed or trained to teach science, technology, engineering or math subjects or content areas must apply to teach in Indiana public school corporations (including charter schools) and must accept employment or a contract for services if offered.

- Individuals who accept program financial support and who do not apply, do not accept employment, do not accept a contract to offer services in an eligible Indiana school corporation or charter school or who do not complete an employment contract or a contract to offer services will be expected to repay the amount of financial support received from the program, absent exigent circumstances.

- Employment or contracting for services in a non-public school is not a permissible program outcome.

- Employment or contracting for services with a non-Indiana school is not a permissible program outcome.

VI. Mandatory and Preferred Activities

Mandatory:
Licensure: the program must result in individuals becoming licensed or trained to teach in Indiana public school K-12 science, technology, engineering or math subjects or content areas for which they were not previously eligible to teach.

- Individuals receiving program support must seek employment in an eligible Indiana public school corporation or charter school.

Preferred:

- Alignment with initiatives that expand STEM learning activities or enhance STEM student academic achievement, such as:
  - Math-Science Partnerships
  - 21st Century Learning Community Center grants
  - National Math & Science Initiative
  - Indiana Works Councils Innovative Career and Technical Education (CTE) grants[5]
  - STEM learning activities in addition to the required instructional time
  - Local school STEM activities

- Connections to initiatives that improve STEM learning and work outcomes in which students complete:
  - Diplomas or certificates of achievement with a STEM emphasis
  - Industry certifications in a STEM occupation
  - Dual credit or advanced placement courses in a STEM subject
  - Internships or apprenticeships in a STEM field

- Connections to Indiana STEM economic growth opportunities, such as:
  - Life sciences, including medical and health technologies
  - Advanced manufacturing
  - Engineering and engineering technologies
  - Computer and information sciences
  - Agriculture and agriscience
  - Energy, including renewable energy
  - Other Indiana STEM growth areas (please specify)

[5] Please reference www.in.gov/irwc/2362.htm for more information on CTE grants.

- Alignment with state and federal incentives that might be applicable to STEM teachers, including:
  - Minority teacher scholarships (IC 21-13-2)
  - Student teaching stipends for high need fields or minorities (IC 21-13-7 and 21-13-8)
  - State, federal or teacher loan forgiveness or cancellation programs

VII. Grant Recipients, Award Amounts and Budget

- Grant recipients and award amounts will be determined by Commission staff in consultation with an advisory team. Awards will be based on review of the application for funding, the scope of work and anticipated outcomes of the project.
- The Commission and the program applicant may mutually agree to modify the requested budget.
- Personnel and financial resource contributions by the applicant and partners will be considered as a stronger commitment to the proposal.
- The range of awards may encompass the implementation of large-scale projects as well as the design and incubation of new ideas and innovations.

VIII. Required Reporting

Indiana Code 21-13-11-12 requires that a recipient of a grant under this chapter submit to the Commission a written report concerning the recipient's compliance with the program evaluation standards on the following dates:

- December 1 of each year[6]
- July 1 of each year[7]

Reports must include:

- For new STEM teachers receiving support through grants funds: the duration of service in an Indiana school corporation or the length of time committed to teaching in an Indiana school corporation
- For pre-service or in-service teachers: average length of service for teachers supported; skills enhanced or new skills attained as part of participation in program using grant funds
- The effectiveness of the program, including:
  - Number of individuals licensed or trained to teach science, technology, engineering or math K-12 subjects and content areas, including dual credit courses in Indiana public schools
  - Teacher ratings according to IC 20-28-11.5, aggregated for the program's participants
- Student academic achievement improvements:
  - ISTEP [math and science]
  - Algebra I end-of-course exam
  - Biology I end-of-course exam
  - Dual credit or advanced placement exams in STEM subjects
  - Industry certification exams in STEM fields
  - Locally-adopted STEM assessments [Acuity, NWEA, etc.]
  - STEM classes or courses added to the school schedule:
    - Increase in number of classes or enrollment in courses already offered
    - New STEM classes added to school's curriculum offerings
- Effective use of funds:
  - Cost per participant
  - Number of individuals who become STEM teachers
  - Length of service expected of program participants
  - New pre-service or in-service teachers supported

[6] Pursuant to IC 21-13-11-13, these reports must be considered in any review of a subsequent grant application from the registered non-profit domestic or foreign corporation.
[7] Same as 7

- Number of schools supported (names and grade levels of schools should be included)

- Partnerships utilized to support student and teacher achievement in STEM-related fields
  - Outcomes of partnerships
  - Number of partnerships created or enhanced utilizing grant funds (names of partners should be included)

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IX. Objectives and Scoring of Application

Existing Organizations and Programs

Objective	Points
Strategies to recruit, train and place new STEM teachers in grant-eligible locations or to enhance the ability of pre-service and in-service teachers to teach new or additional STEM-related coursework	40
Cost effectiveness of proposal including, but not limited to: o New pre-service or in-service teachers supported o Number of K-12 public schools supported through programs utilizing grant funds	20
STEM teacher retention strategies	15
Partnerships with STEM-based industries, organizations and service providers	15
Program history specific to Indiana and compliance with evaluation standards [8]	10
Total	100

New Organizations and Programs

Objective	Points
Strategies to recruit, train and place new STEM teachers in grant-eligible locations or to enhance the ability of pre-service and in-service teachers to teach new or additional STEM-related coursework	40
Cost effectiveness of proposal including, but not limited to: o New teachers to be supported o Number of K-12 public schools to be supported	25
STEM teacher retention strategies	25
Current or proposed partnerships with STEM-based industries, organizations and service providers	10
Total	100

[8] Pursuant to IC 21-13-11-13, the reports required by IC 21-13-11-12 must be considered in any review of a subsequent grant application from an eligible registered non-profit domestic or foreign corporation.

APPENDICES

APPENDIX A

APPLICATION EVALUATION - Existing Organizations and Programs

Strategies to recruit, train and place new STEM teachers in grant-eligible locations or to enhance the ability of pre-service and in-service teachers to teach new or additional STEM-related coursework

- Outreach and recruiting activities for new teachers
- Training activities and teacher placement success
- Enhancement of pre-service and in-service teachers' abilities to teach new or continuing STEM-related subject matter

Maximum Pages: 6 Maximum Points: 40

Cost effectiveness of proposal including, but not limited to:

- New teachers to be supported
- Number of K-12 public schools to be supported
- Fund usage as stated in budget worksheet; particular emphasis will be placed on percentage of funding going to staffing, travel and related costs as a percent of total fund usage

Maximum Pages: 4 Maximum Points: 20

STEM teacher retention strategies

- Methods used to retain new STEM teachers and to support the growth of in-service teachers
- Quantitative data showing retention achieved through the organization or program

Maximum Pages: 4 Maximum Points: 15

Current or proposed partnerships with STEM-based industries, organizations and service providers

- Relationships with entities supporting student and teacher achievement in STEM-related fields

Maximum Pages: 4 Maximum Points: 15

Program history specific to Indiana and compliance with evaluation standards

- Organization's prior history and outcomes working in and with Indiana school corporations to increase STEM Teaching outcomes
- Compliance with grant evaluation standards of prior grant as reported by the organization

Maximum Pages: 2 Maximum Points: 10

Total Maximum Pages:	**20**	**Total Maximum Points:**	**100**

APPENDIX B

APPLICATION EVALUATION - New Organizations and Programs

Strategies to recruit, train and place new STEM teachers in grant-eligible locations or to enhance the ability of pre-service and in-service teachers to teach new or additional STEM-related coursework

- Outreach and recruiting activities for new teachers
- Training activities and teacher placement success
- Enhancement of pre-service and in-service teachers' abilities to teach new or continuing STEM-related subject matter

Maximum Pages: 6 Maximum Points: 40

Cost effectiveness of proposal including, but not limited to:

- New pre-service or in-service teachers supported
- Number of K-12 public schools supported through programs utilizing grant funds
- Fund usage as stated in budget worksheet; particular emphasis will be placed on percentage of funding going to staffing, travel and related costs as a percent of total fund usage

Maximum Pages: 4 Maximum Points: 25

STEM teacher retention strategies

- Methods used to retain new STEM teachers and support the growth of in-service teachers
- Quantitative data showing retention achieved through the organization or program

Maximum Pages: 4 Maximum Points: 25

Current or proposed partnerships with STEM-based industries, organizations and service providers

- Relationships with entities supporting student and teacher achievement in STEM-related fields

Maximum Pages: 4 Maximum Points: 10

Total Maximum Pages:	**18**	**Total Maximum Points:**	**100**

APPENDIX C

Budget Worksheet

Please refer to the Excel Spreadsheet provided as part of the application packet

APPENDIX D

Statute Governing STEM Teacher Recruitment Grant Fund

IC 21-13-11[9]

Please refer to the following statute:

http://iga.in.gov/legislative/laws/2016/ic/titles/021/articles/013/chapters/011/

[9] HEA 1001-2015 dissolved the Indiana Education Roundtable and assigned administration of the grant fund to the Indiana Commission for Higher Education

APPENDIX E

Quantitative Reasoning STEM Courses

Quantitative Reasoning STEM courses eligible for the Indiana STEM Teacher Recruitment Fund grant program.

	PLTW [10]	Non-PLTW
Quantitative Reasoning: Engineering		
Computer Integrated Manufacturing	4810	5534
Principles of Engineering	4814	5644
Aerospace Engineering	4816	5518
Civil Engineering and Architecture	4820	5650
Digital Electronics	4826	5538
Engineering Design and Development	4828	5698
Quantitative Reasoning: Math		
Calculus		2527
Finite Mathematics		2530
Advanced Mathematics, Special Topics: Insert title descriptive of course content		2543
Advanced Mathematics, College Credit		2544
Probability and Statistics		2546
Quantitative Reasoning		2550
Integrated Mathematics III		2558
Calculus AB, Advanced Placement		2562
Pre-Calculus – 1 Semester		2564
Trigonometry - 1 semester		2566
Advanced Modeling and Analysis		2568
Statistics, Advanced Placement		2570
Calculus BC, Advanced Placement		2572
Further Mathematics, Higher Level International Baccalaureate		2580
Mathematics Higher Level, International Baccalaureate		2582
Mathematics Standard Level, International Baccalaureate		2584
Mathematical Studies Standard Level, International Baccalaureate		2586

[10] Project Lead the Way

APPENDIX F

Career and Technical Education STEM Courses

High School STEM Courses for the STEM Teacher Recruitment Fund Grant Program; Career and Technical Education Courses are underlined

Course Number	High School Subject Area and Course Title
ADVANCED COURSES FOR DUAL CREDIT	
2544	Advanced Mathematics, College Credit
3090	Advanced Science, College Credit (L)
ADVANCED PLACEMENT	
3020	Biology, Advanced Placement (L)
2562	Calculus AB, Advanced Placement
2572	Calculus BC, Advanced Placement
3060	Chemistry, Advanced Placement
4570	Computer Science A, Advanced Placement
3012	Environmental Science, Advanced Placement (L)
3080	Physics B, Advanced Placement (L)
3088	Physics C, Advanced Placement (L)
2570	Statistics, Advanced Placement
AGRICULTURAL EDUCATION	
5070	Advanced Life Science, Animals (L)
5072	Advanced Life Science, Foods (L)
5074	Advanced Life Science, Plants and Soils (L)
5088	Agriculture Power, Structure and Technology
5008	Animal Science
5102	Food Science
5132	Horticultural Science
5170	Plant and Soil Science
5180	Natural Resources
5229	Sustainable Energy Alternatives
BUSINESS, MARKETING, & INFORMATION TECHNOLOGY	
4516	Computer Illustration and Graphics
4534	Computer Programming I
5236	Computer Programming II
4570	Computer Science A, Advanced Placement
4584	Computer Science Higher Level, International Baccalaureate
4586	Computer Science Standard Level, International Baccalaureate
5242	Information Technology in a Global Society Higher Level, International Baccalaureate

CAREER & TECHNICAL EDUCATION

5238	Advanced Career & Technical Education, College Credit

ENGINEERING & TECHNOLOGY EDUCATION

5608	Advanced Manufacturing I
5606	Advanced Manufacturing II
5518	Aerospace Engineering non-PLTW
4816	Aerospace Engineering PLTW
5648	Biotechnical Engineering non-PLTW
4818	Biotechnical Engineering PLTW
5650	Civil Engineering and Architecture non-PLTW
4820	Civil Engineering and Architecture PLTW
4780	Communication Systems
5534	Computer Integrated Manufacturing non-PLTW
4810	Computer Integrated Manufacturing PLTW
4800	Computers in Design & Production
4822	Design Technology Higher Level, International Baccalaureate
4824	Design Technology Standard Level, International Baccalaureate
5538	Digital Electronics non-PLTW
4826	Digital Electronics PLTW
5698	Engineering Design and Development non-PLTW
4828	Engineering Design and Development PLTW
4796	Introduction to Advanced Manufacturing and Logistics
4802	Introduction to Engineering Design non-PLTW
4784	Introduction to Manufacturing
5644	Principles of Engineering non-PLTW
4814	Principles of Engineering PLTW

HEALTH SCIENCE EDUCATION

5276	Anatomy and Physiology
5284	Health Science Education II: Nursing formerly Health Science Education II
5214	Health Science Education II: Pharmacy formerly Introduction to Pharmacy
5215	Health Science Education II: Physical Therapy formerly Introduction to Physical Therapy
5216	PLTW Human Body Systems
5217	PLTW Medical Interventions
5218	PLTW Principles of Biomedical Sciences
5219	PLTW Biomedical Innovations

INTERNATIONAL BACCALAUREATE

3032	Biology Higher Level, International Baccalaureate

	Biology Standard Level,
3034	International Baccalaureate
	Chemistry Higher Level,
3070	international Baccalaureate
3072	Chemistry Standard Level, International Baccalaureate
4584	Computer Science Higher Level, International Baccalaureate
4586	Computer Science Standard Level, International Baccalaureate
3014	Environmental Systems Standard Level, International Baccalaureate
	Environmental Systems and Societies Standard Level, International
3016	Baccalaureate
	Information Technology in a Global Society Higher Level, International
5242	Baccalaureate
	Information Technology in a Global Society Standard Level, International
5246	Baccalaureate
2582	Mathematics Higher Level, International Baccalaureate
2586	Mathematical Studies Standard Level, International Baccalaureate
2584	Mathematics Standard Level, International Baccalaureate
3096	Physics Higher Level, International Baccalaureate
3098	Physics Standard Level, International Baccalaureate

MATHEMATICS

2544	Advanced Mathematics, College Credit
2543	Advanced Mathematics, Special Topics: Insert title Descriptive of course content
2568	Advanced Modeling and Analysis
2516	Algebra I Lab
2520	Algebra I
2522	Algebra II
2527	Calculus
2562	Calculus AB, Advanced Placement
2572	Calculus BC, Advanced Placement
2530	Finite Mathematics
2580	Further Mathematics, Standard Level International Baccalaureate
2532	Geometry
2518	Integrated Mathematics I Lab
2554	Integrated Mathematics I
2556	Integrated Mathematics II
2558	Integrated Mathematics III
2586	Mathematical Studies Standard Level, International Baccalaureate
2582	Mathematics Higher Level, International Baccalaureate
2560	Mathematics Lab
2584	Mathematics Standard Level, International Baccalaureate
2564	Pre-Calculus/Trigonometry - 2 semesters
2546	Probability and Statistics
2550	Quantitative Reasoning
2570	Statistics, Advanced Placement

2566	Trigonometry - 1 semester

SCIENCE

3090	Advanced Science, College Credit (L)
3092	Advanced Science, Special Topics (L)
5276	Anatomy and Physiology
3024	Biology I (L)
3026	Biology II (L)
3020	Biology, Advanced Placement (L)
3032	Biology Higher Level, International Baccalaureate
3034	Biology Standard Level, International Baccalaureate
3064	Chemistry I (L)
3066	Chemistry II (L)
3060	Chemistry, Advanced Placement
3070	Chemistry Higher Level, International Baccalaureate
3072	Chemistry Standard Level, International Baccalaureate
3044	Earth and Space Science I (L)
3046	Earth and Space Science II (L)
3010	Environmental Science (L)
3012	Environmental Science, Advanced Placement (L)
3014	Environmental Systems Standard Level, International Baccalaureate
3016	Environmental Systems and Societies Standard Level, International Baccalaureate
3108	Integrated Chemistry-Physics (L)
3084	Physics I (L)
3086	Physics II (L)
3080	Physics B, Advanced Placement (L)
3088	Physics C, Advanced Placement (L)
3096	Physics Higher Level, International Baccalaureate
3008	Science Research, Independent Study (L)
3094	Science Tutorial

TRADE AND INDUSTRIAL EDUCATION

5608	Advanced Manufacturing I
5606	Advanced Manufacturing II
4796	Introduction to Advanced Manufacturing and Logistics