THREE OPEN RANK, TENURE-TRACK POSITIONS
Cluster Hire in K-12 Integrated STEM Teacher Education
Joint Appointments in College of Education and
College of Science, College of Engineering, or College of Agriculture

POSITION:
Purdue University is transforming its STEM teacher education as it exists today—from a model of instruction in demarcated subject areas to a model in which teachers learn to integrate scientific inquiry, engineering and technological design, and mathematical thinking and reasoning as pedagogical approaches to STEM instruction. To this end, the Colleges of Education, Science, Engineering, and Agriculture at Purdue University invite applications for three full-time, tenure-track, jointly appointed positions at the level of assistant, associate, or full professor to join the new K-12 Integrated STEM Teacher Education Initiative. Specifically, we are seeking dynamic, innovative, and collaboration-oriented applicants for:

• One position in Physics Education: Joint appointment in the College of Education (Department of Curriculum and Instruction) and the College of Science (Department of Physics and Astronomy). The majority appointment/tenure home and minority appointment will be determined based on the interest and credentials of the candidate. If applicant’s PhD is in an education-related field, then a minimum of a Master’s degree in physics is preferred.

• One position in Engineering Education: Majority appointment/tenure home in the College of Engineering (School of Engineering Education) and a minority appointment in the College of Education (Department of Curriculum and Instruction); a PhD in engineering or education with at least one degree in engineering or closely related field is required for this position.

• One position in Agricultural Education: This position is a majority appointment in the College of Agriculture (Department of Youth Development and Agricultural Education); Minority appointment in the College of Education (Department of Curriculum and Instruction); a PhD in education with one degree or professional experiences in agriculture, food or environmental sciences, or closely related STEM field is required for this position.

The integrated STEM initiative at Purdue is focused squarely on the teaching and learning of science and mathematics through the integration of engineering and technological design. Successful candidates will be expected to make a strong contribution to advancing the integrated K-12 STEM teacher education initiative; build collaborative relationships with colleagues in the cluster hire and related disciplines; and provide leadership for ongoing efforts to transform K-12 teacher preparation in STEM disciplines.

Purdue University is an ADVANCE institution, and the Colleges of Education, Science, Technology, Engineering, and Agriculture are committed to advancing diversity in all areas of faculty effort, including research, teaching, and engagement.

REQUIRED QUALIFICATIONS:
Applicants should hold an earned doctorate in a field related to STEM education. Commensurate with rank, we seek individuals who have established a nationally/internationally recognized and coherent research program, made significant contributions to their field through a wide range of scholarly accomplishments, obtained extramural funding to support research and innovative practice and demonstrated leadership in the field or have the potential to do so. Successful
candidates will have a demonstrated commitment to diversity and cross-disciplinary collaboration. They will be expected to engage in collaboration with other cluster hires and current faculty around the integrated STEM teacher education initiative at Purdue.

**DESIRED QUALIFICATIONS:** Applicants should have expertise related to K-12 teacher education in chosen field as well as innovative research, teaching and/or engagement plans in STEM integration. Preference will be given to applicants with K-12 teaching experience. We also welcome applicants who would bring expertise in diversity and equity related to STEM education.

**POSITION DESCRIPTION:** Successful candidates will receive a 10-month academic year appointment, with some potential for other funded work and/or teaching in the summer. In addition, start-up packages will be offered. The position responsibilities include:

- Conducting signature collaborative research and disseminating results and ongoing findings via publications and presentations to local, state, national, and international professional organizations;
- Seeking external funding in support of a focused research program aligned with the integrated STEM teacher education initiative as well as other strategic initiatives for the University; the Colleges of Education, Science, Technology, Engineering, and/or Agriculture; and centers including the Center for Advancing the Teaching and Learning of STEM (CATALYST), Discovery Learning Research Center (DLRC) and the Institute for P-12 Engineering Research and Learning (INSPIRE);
- Teaching:
  - For a majority appointment in Curriculum and Instruction: teaching undergraduate-level pedagogy courses, physics student teaching supervision, and/or graduate courses in curriculum and instruction, including the possibility for creating and co-teaching new integrated STEM courses and/or transforming existing courses to include more integration of scientific inquiry, engineering and technological design, and mathematical thinking and reasoning; plus an undergraduate introductory level physics course for elementary education majors.
  - For a majority appointment in Physics and Astronomy: teaching undergraduate-level physics courses and/or graduate courses in physics/physics education, including the possibility for creating and co-teaching new integrated STEM courses and/or transforming existing courses to include more integration of scientific inquiry, engineering and technological design, and mathematical thinking and reasoning; plus an undergraduate-level pedagogy course in curriculum and instruction and/or physics student teaching supervision.
  - For a majority appointment in Engineering Education: teaching in a design-focused introductory first-year engineering course, and graduate courses in engineering education, including the possibility for creating and co-teaching new integrated STEM teacher education courses and/or transforming existing courses to include more integration of engineering design, and mathematical analysis; plus undergraduate-level pedagogy and/or content courses in curriculum and instruction.
  - For a majority appointment in Agricultural Education: teaching undergraduate-level courses and graduate courses in agricultural education, including the possibility for creating and co-teaching new integrated STEM courses and/or transforming existing courses to include more integration of scientific inquiry, engineering and technological design, and mathematical thinking and reasoning; plus an undergraduate-level pedagogy course or content course in curriculum and instruction, and/or agriculture education student teaching supervision.
- Recruiting, advising, and mentoring master’s and doctoral students;
- Affiliating with the Center for Advancing the Teaching and Learning of STEM (CATALYST) to
support emerging integrated STEM teacher education programs.

STARTING DATE: August 17, 2015

APPLICATION: Review of complete applications will begin on October 15, 2014, and will continue until the positions are filled. Application materials must be submitted online at http://www.education.purdue.edu/news/STEM-Faculty-Search.html.

A complete application includes: (a) a letter of application with a statement about the applicant’s perspective on how s/he will contribute to the Integrated STEM Teacher Education Initiative at Purdue, (b) a current vita, (c) a 2-page narrative describing the applicant’s research program, (d) a 2-page narrative describing the applicant’s teaching philosophy for STEM integration, (e) one example of scholarly writing (e.g., publication, conference paper, dissertation chapter), and (f) three letters of recommendation.

Application components (a) through (d) should be submitted in order as a single PDF document. The example of scholarly writing may be included in the single PDF or uploaded as a separate PDF. To submit the PDF document(s), please use the button, “Apply for a Cluster Hire Position.” The three letters of recommendation should be submitted online by the person writing the letter of recommendation using the button, “Submit a Letter of Recommendation.”

A background check is required for employment in these positions.

Inquiries about the positions should be directed to Professor Lynn Bryan, K-12 Integrated STEM Teacher Education Search Chair, at labryan@purdue.edu.

INTEGRATED STEM INITIATIVE: Successful applicants will join Purdue University faculty in the Integrated STEM initiative at Purdue, focusing their work on (1) building the leading research program on integrated STEM education, and one of the first to integrate a focus on issues of diversity and equity in K-12 classrooms; (2) creating integrated STEM teacher education courses, endorsement programs, and research programs that are at the forefront of teacher preparation across the STEM disciplines; (3) increasing the number of highly-qualified integrated STEM teachers and teacher educators, particularly from diverse backgrounds; (4) developing a network of partner school districts that support, encourage, and engage in the implementation of integrated STEM initiatives; and (5) leading state and national level advocacy efforts to influence policy-making and increase public support of integrated STEM teaching and learning.

THE UNIVERSITY: Purdue, a leading land grant and research university, ranks among the 15 largest universities in the nation. The university has an enrollment of more than 38,700 on the West Lafayette Campus and more than 24,000 on regional campuses. It is located in West Lafayette, IN, 1 hour NW of Indianapolis and 2 hours SE of Chicago.

Purdue University is an equal opportunity/equal access/affirmative action employer fully committed to achieving a diverse workforce.