2006-08 Physics Resources and Instructional Resources and Instructional Strategies (PRISST) – A Professional Development Program for Out-of-Field Physics Teachers*

Academic Year 2006-07    Academic Year 2007-08

- Are you currently teaching physical science and/or physics without a State of Iowa Grades 7-12 physics teaching endorsement? Would you be interested in completing the necessary requirements for the endorsement under one complete program from one university within two years?
- Would you like to receive professional development in physics/physics content pedagogy with the focus on interactive engagement methods including Physics Resources and Instructional Strategies for Motivating Students (PRISMS) PLUS (http://www.cplearning.com/) and Modeling Instruction (http://modeling.asu.edu/)? Would you like to be introduced to the latest research-based curricula and resources that incorporate the use of technology in the classroom? Would you like to receive remediation and/or enrichment in the mathematics necessary to teach physical science/physics effectively?
- Would you like to receive professional development that is consistent with the latest national and state science initiatives including the National Science Education Standards, Every Learner Inquiries (ELI), Enhancing Education Through Technology (E2T2) – Science Initiative, and the State of Iowa Model Core Science Curriculum which focuses on the Rigor and Relevance framework?
- Would you like to be part of a Grades K-16 State of Iowa physics/physical science community that would enable you to network with colleagues, university physics & science education faculty, and master secondary physics/physical science teachers and to receive on-going instructional support as you implement the latest interactive engagement methods in your physical science/physics classroom(s)?

If your answers to any or all of these questions are yes, the University of Northern Iowa PRISST program is for you. PRISST has been recently funded by a No Child Left Behind (NCLB) Act Title II Grant administered by the Board of Regents, State of Iowa, and the Iowa Department of Education. PRISST addresses the existing shortage of qualified Iowa high school physics teachers by providing a means for a cohort of 15 science teachers (Middle School to High School) with some support from their school administration and AEA to complete the minimum requirements for the State of Iowa Grades 7-12 physics teaching endorsement (15 semester hours of college physics content for those who have 30 hours in the broad field of science) in one complete professional development program over a period of two years. PRISST would be delivered over two intense 4-week summer (M-F day-long) sessions at the UNI campus and in actual high school classroom settings along with four Saturday daylong on-campus sessions during the intervening academic years combined with the teachers participating in two in-state professional conferences and their students participating in the State of Iowa Physics Olympics competition.

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Participating teachers will receive free graduate tuition for up to 15 credit hours, free room & board for summer sessions, stipends ($1200 per summer and about $500 per academic year), travel & meal expenses, paid conference registrations, and instructional materials and resources. In addition, with the assistance of outside funds which have yet to be secured, participating teachers may receive equipment funds for their classroom in the amount of at least $2000. Participants will be required to submit a completed application for the State of Iowa Grades 7-12 physics teaching endorsement upon completion of the PRISST program. Participating teachers must have the support of their school administration which would allow their teacher(s) to participate in the UNI on-campus sessions and in-state professional conferences during each academic year as well as their students participating in the State of Iowa Physics Olympics competition. Participant’s school administrators and their AEA science consultant(s) will be invited to participate in one day meetings during each summer and the following academic year to work with their teacher(s). They will be provided travel and meal support to participate in these meetings.

The project staff includes Dr. Larry Escalada, Karen Couch Breitbach, Michael Roth, and Les Burns. Escalada is the project director and UNI associate professor of physics and science education. He has been involved in two NSF-funded curriculum instructional materials projects with extensive professional development components including Visual Quantum Mechanics and PRISMS PLUS. He is also the UNI Physics Department Outreach and Professional Development coordinator. He currently serves on the State of Iowa Science Model Core Curriculum Committee and the State of Iowa Physics Olympics Rules Committee. Couch Breitbach, physics and science education instructor at the UNI Malcolm Price Laboratory School, is nationally board certified and has extensive experience in the development and implementation of integrating physics with advanced mathematics/pre-calculus and technology into a high school classroom. Roth, a UNI associate professor of physics, is a computational physicist who conducts research related to modeling physical phenomena and who has extensive experience in science education. Burns, a physical science and physics instructor at Hudson Community School, has extensive experience in implementing Modeling Instruction in physical science and physics class rooms and providing professional development for teachers in Modeling Instruction.

If you or someone you are know are interested in participating in the PRISST program, please have the application form completed and submit it with the appropriate signatures by April 26, 2006. The applications will be reviewed and a cohort of 15 teachers will be selected to participate in the program. Teachers selected to participate in the program will be notified by May 19, 2006. If you have any questions and/or would like additional information, please contact Larry Escalada via email (escalada@uni.edu) or phone (319-273-2431).
UNI PRISST Program Application Form

Instructions: Send the completed form with the appropriate signatures by April 26, 2006 to
PRISST Program
c/o Dr. Larry Escalada
113 B Center for Energy and Environmental Education
University of Northern Iowa
Cedar Falls, IA 50614-0150

The completed form with the appropriate signatures may be faxed to 319-273-7136 or scanned to escalada@uni.edu. Fill free to attach a sheet if additional space is needed for any response.

Contact Information
Name__________________________________________
School_________________________________________
Address________________________________________
City________________________  Zip Code___________
School Phone ____________________________
   (area code) (number)
School Fax ____________________________
   (area code) (number)
Home Address___________________________________
City________________________  Zip Code___________
Home Phone ____________________________
   (area code) (number)
email(s)___________________________________
__________________________________
AEA______________________________________
   (Identify the AEA that provides services for your school.)

Relevant Teacher, Course, and School Information
Number of years teaching experience________________
List subjects you are currently teaching_______________
   _______________________________________________
Grade levels(s) currently teaching____________________
Subject area(s) of expertise_________________________
   _______________________________________________
Number of years teaching physical science or physics________________
Total # of students in school________________________
Population of community in which school is located or nearest community________________________
Total # of students taking physics per year___________
Identify the various levels of physical science and physics taught at your school________________
Total number of semester credit hours of college level physics completed________________
Have you completed the equivalent of an introductory algebra-based physics college course? If yes, how many semesters?
Do you currently hold a State of Iowa Grades 7-12 physics teaching endorsement?____________________
Are you currently teaching physical science and/physics without one?_______________________________
Describe your interest in the PRISST program__________________________________________________
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Describe your teaching philosophy______________________________________________________________
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If selected, would you be committed to participate in the full PRISST program (both summers with the academic year follow-up after each summer session)? If not, explain.
   (Please note to be considered for this program you must participate in at least the first summer session and the academic year follow-up.)
If selected, would you be staying in the dorm at the UNI campus during the summer session or commuting?

Teacher’s Signature    Date ____________________________
Principal’s Signature    Date ____________________________