

For TEA Use Only:

Reviewer: \_\_\_\_\_  
Date Assigned: \_\_\_\_\_  
Date Due: \_\_\_\_\_

- New Course  
 Renewal & Evaluation  
 Evaluation Only

Division of Curriculum  
Transmittal Form for Innovative Course and Program Approval  
(Deadline: February 16, 2006)

(1) Plano Independent School District (2) 043-910  
District Name County/District Number

(3) 2700 West 15<sup>th</sup> Street, Plano, Texas 75075  
Mailing Address, City, Zip Code

(4) Name of superintendent Dr. Douglas Otto

(5) Contact person Melanie Kelley

(6) Email address of contact person [mkelley@pisd.edu](mailto:mkelley@pisd.edu)

(7) Phone number for contact person 469-752-8198

(8) Date of local board of trustees approval Pending on Board Agenda

(9) Innovative courses submitted for approval:  
Please Note: One Transmittal Form per course except for multiple levels of the same course i.e. one transmittal for DCP I & II and one transmittal for Latin Literature.

(a) Science Capstone Overview of Research and Education (SCORE)  
Circle One: Magnet Course of Innovative Course

The innovative or magnet course application should be submitted to:

**Attn: Hellen R. Bedgood, Assistant Curriculum Director**  
**Division of Curriculum**  
**Texas Education Agency**  
**1701 N. Congress Avenue**  
**Austin, TX 78701-1494**  
**or**  
**FAX: (512) 463-8057**

**Please submit your application at least six months prior to implementation.**  
**For Fall 2006 implementation, please submit your application by February 16, 2006.**

**ALL APPLICATIONS MUST BE POSTMARKED OR FAXED**  
**ON OR BEFORE FEBRUARY 16, 2006.**  
**APPLICATIONS THAT DO NOT MEET THIS DEADLINE MAY BE CONSIDERED**  
**FOR IMPLEMENTATION IN THE 2006-07 SCHOOL YEAR**

**TEXAS EDUCATION AGENCY  
DIVISION OF CURRICULUM**

**2006-2007 INNOVATIVE/MAGNET COURSE APPLICATION**

(1) Course Title Science Capstone Overview of Research and Education (SCORE)

(2) District Name Plano Independent School District

(3) Course Requirements:

**A. Description of the course and its essential knowledge and skills**

Science Capstone Overview of Research and Education (SCORE) focuses on the future of science and technology and the opportunity for students to interact with senior university faculty and research scientists to discuss the cutting edge in science disciplines and what the future might hold. Sharing science research methods and current topics with University of Texas at Dallas professors will give students applications of science and research for the evaluation and exploration of science and engineering career opportunities. Research of the changing face of science and how it will fit into each individual student's future will guide them in career choices and college planning. Discussion and evaluation of the impact of science research and its impact on scientific thought, technology, society and the environment will be a significant dynamic of the course. The transition for students from high school to the university setting will be simplified by interacting directly with university professors on the university campus, accessing libraries for research, and using science facilities to gain hands-on experiences.

Areas of study include:

**Physical Sciences**

- Space Science and Physics
- Geosciences and Remote Sensing Geospatial Science

**Biological Sciences**

- Molecular Biology
- Gene Mapping
- Recombinant DNA

**Biochemistry**

- Applications of Nanotechnology

**Neuroscience**

- Neural Networks
- Cortical Plasticity

**Material Science**

- Flexible Displays,
- Carbon Nanotubes

## **Engineering and Computer Science**

- Artificial Intelligence
- Digital Forensics

## **Applied Technology**

- Computer Simulation and Motion Capture
- Geographic Information Systems

### **B. Rationale and justification for the request in terms of student need**

SCORE is a capstone course for senior students who have completed science and mathematics courses through physics and pre-calculus and have the desire to pursue a career in engineering, science, medicine and health, or technology. The proposal for this course is a product from the coalition between UTD, Texas Instruments, and Plano ISD. Students benefit from enrichment of science by being exposed to more science information and experiences which will help students make decisions about course work, specializations, and increase understanding of college expectations. The classes will be held at the University of Texas at Dallas campus, and direct exposure to university science research, facilities, and a post-secondary environment will ease students in their transition from high school to a university setting. A high school science teacher will provide the support needed by students to be successful in the requirements of the course.

### **C. Description of activities, major resources, and materials to be used**

Students will participate in laboratory experiences, as provided by UTD professors. Discussion by means of Socratic seminars and presentations, field trips to area industries, such as Texas Instruments will enrich their experience and provide a reality to the application of science. Students will be required to maintain journals and log books to include library research and literature reviews which will provide background information to enrich class discussion. The class will be located at the University of Texas at Dallas campus providing easy access to science laboratories and the campus library.

### **D. Methods for evaluating student outcomes**

Students will be evaluated on an ongoing basis from their participation in and/or completion and quality of library assignments, journals and logbooks of lab activities and demonstrations and discussion. Students, teachers and parents will complete surveys, questionnaires and evaluations of the course at its conclusion. Student enrollment will also be considered for evaluation purposes.

### **E. Qualifications of teachers**

A certified secondary science teacher of an Advanced Placement Science or a third year science course will facilitate the course activities, and student participation. University of Texas at Dallas professors will present their expertise in their area of study and research, and facilitate laboratory experiences and seminar discussion.

### **F. Amount of credit requested**

.5 credit (semester course)

### **G. School years for which approval is requested**

2005-2006 through 2008-2009