

2009 SUMMER SCHOOL SCHEDULE HIGHLIGHTS DEPARTMENTS OF PHYSICAL SCIENCES

***Are you looking for professional development opportunities?
OR PURSUING AN ADDITIONAL (SECOND-FIELD) LICENSURE?
Or a Master's degree program for the physical sciences teacher?
IF SO, THE FOLLOWING CAN HELP YOU!!***

◆ **Second-Field Endorsement/Additional Licensure Courses for Inservice Teachers**

Are you considering or pursuing a second-field endorsement in **chemistry** (Kansas Endorsement Code **1321**), **earth-space science (1381)** or, **physics (1331)**. Or do you teach a **general science, middle-level or science 5-8 (1341)** and/or **physical science course**? If so, the following courses offered in summer school 2009 can help you achieve your licensure or professional development goals:

- ◆ CH 123/124 Chemistry I Lecture/Lab (3/2 hrs);
- ◆ CH 126/127 Chemistry II Lecture/Lab (3/2 hrs);
- ◆ CH 370/371 General Organic Chemistry Lecture/Lab (3/2 hrs); or
CH 772 Foundations in Organic Chemistry, as a graduate-level counterpart (3hrs);
- ◆ ES 110/111 Introduction to Earth Science Lecture/Lab (4/1 hrs); or
ES 567A, B, or C, Physical Geology, Meteorology, or Astronomy for Teachers (3, 1 and 1 hr) as graduate-level counterparts;
- ◆ GO 547 Field Geology (5 hrs); (or variants of ES 747 Field Studies in Earth Science for 2 to 4 hours credit);
- ◆ PH 500/700 Modeling Physics Instruction; **and**
- ◆ PH 540 Modern Physics (3 hrs).

See the final class schedule via the ESU or Physical Sciences URL web sites <http://www.emporia.edu/physci> for course or workshop dates and times. Most of these courses/workshops —and additional— meet on an alternating or every third-summer basis. For specific information regarding physical science licensures, contact Drs. DeWayne Backhus or Ken Thompson, Departments of Physical Sciences, (620) 341-5330, or via email dbackhus@emporia.edu or kthomps@emporia.edu. For general information concerning the second-field endorsement program, contact Ms. Shannon Hall, the ESU Teachers College, (620) 341-5412, or shall6@emporia.edu.

◆ **Pending...A No Child Left Behind (NCLB) Grant for a 3-Week Modeling Workshop for Chemistry and Physics Teachers**

Emporia State and Fort Hays State universities have prepared a three-year NCLB proposal for funding through the Kansas Board of Regents for inservice chemistry and physics teachers. The three-week workshops are designed to enhance content knowledge while improving pedagogy by incorporating the modeling instructional approach, inquiry learning cycles, critical and creative thinking, cooperative learning, and effective use of classroom technology in science instruction. Contact Dr. Malonne Davies, mdavies@emporia.edu, for additional information as it becomes available.

◆ Pending Additional Support, NASA Space Grant Funding for a one-week Modeling Physics Workshop for Inservice Teachers

Workshop participants will be introduced to the “modeling” physics pedagogical strategy developed at Arizona State University. The study of motion (kinematics) and forces producing motion (dynamics and Newton’s laws) will be the context to introduce the modeling strategy; other topics, e.g., electricity, magnetism, or circuits and circuit components may be explored in a modeling context as time allows.

Instructors will be Earl Legleiter, an experienced high school science teacher who is trained in the modeling pedagogical strategy, and Jorge Ballester, physics professor at ESU who was the ESU Rural Regional Center Coordinator for the American Association of Physics Teachers (AAPT) Physics Teaching Resource Agent (PTRA) workshops from 2002-2008, and has participated in workshops for middle- and high-school teachers of the physical sciences. External funding (from NASA Space Grant) for participant support for tuition, housing (for non-commuters), and lunches exists for a limited number of participants, and additional is being sought; see the www.emporia.edu/physci URL for workshop details and application forms. The workshop courses will be offered June 29-July 3, 8:30 am – 4:00 pm, Monday-Thursday, and 8:30am-noon on Friday.

◆ Graduate Program for Physical Sciences Teachers

The ESU Departments of Physical Sciences offer a principally summer-based master’s degree program in the physical sciences; however, some courses may be taken during the academic year or online. This program can normally be completed in three or four years (depending on individual circumstances) and is designed for teachers of chemistry, earth science, physics and the physical sciences. For more information contact: Departments of Physical Sciences, Box 4030, Emporia State University, Emporia, KS 66801-5087, call (620) 341-5330, or email dbackhus@emporia.edu or kthomps@emporia.edu.

Departments of Physical Sciences

<http://www.emporia.edu/physci>

(for details regarding the courses/workshops)

Email: DeWayne Backhus, dbackhus@emporia.edu

Ginger Tabares, gtabares@emporia.edu

Emporia State University

<http://www.emporia.edu>

(for registration, tuition/fee, and other general information)