HIGHLIGHTS FOR 2006 SUMMER SCHOOL SCHEDULE
DEPARTMENTS OF PHYSICAL SCIENCES
http://www.emporia.edu/physsci
Emporia State University
http://www.emporia.edu

Second-Field Endorsement 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 2006 can help you achieve your licensure or professional development goals (including NCLB highly qualified status): CH 376/377 Quantitative Analysis Lecture/Lab (3/2 hrs); PH 140/141 College Physics I Lecture/Lab (3/2 hrs); PH 143/144 College Physics II Lecture/Lab (3/2 hrs); PH 741 Advanced Physics Lab (3 hrs); or PS 516 Teaching Physical Sciences in Middle/High Schools (3 hrs); ES 110/111 Introduction to Earth Science Lecture/Lab (4/1 hrs), ES 567A, B, or C, Physical Geology, Meteorology, or Astronomy for Teachers (3, 1 and 1 hr), or ES 555 Small-Format Aerial Photography. See the final class schedule via the ESU or Physical Sciences URL web sites (see above) for course details. (Most of these courses/workshops meet on an alternating or every third-summer basis.) For additional information, contact Drs. DeWayne Backhus or Ken Thompson, Departments of Physical Sciences, (620) 341-5330, or via email backhusd@emporia.edu or thompsov@emporia.edu. For information concerning the second-field endorsement program, contact Ms. Judy Wild, the Teachers College, (620) 341-5412, or wildjudy@emporia.edu.

CH 500 Chemical Safety and Hazardous Waste Management

This online course with a one-day high school site visit (time and location to be determined in consultation with enrollees) provides an introduction to modern principles and practices of laboratory safety, chemical inventory organization, and hazardous waste management. Safety measures and appropriate corrective actions for various laboratory-scale accidents are considered. Particular emphasis is placed on compliance with OSHA, EPA and KDHE regulations related to chemical safety and hazardous waste management. Enrollees will visit a high school site and develop safety and management plans for high school laboratories and chemical inventories. See http://www.emporia.edu/~roachjim for any additional information. Instructor: Dr. Jim Roach, associate professor of chemistry and ESU Hazardous Waste Officer. Dates: May 30-June 16, for online component plus one arranged day. Two credit hours.

CH 500B Green Chemistry Workshop

“Green chemistry” has become an emerging field of scientific study. In order to expand interest and study of this environmentally friendly approach to chemistry, it is vital that students be exposed early in their studies of science. This workshop course will introduce key concepts and applications of green chemistry that can be implemented in
high school chemistry curricula. Both classroom and laboratory activities will be investigated. These activities will vastly reduce chemical waste produced in the laboratory, solving a disposal problem often encountered in high schools, in addition to other environmental benefits. For additional information, contact Dr. Jeremy Mitchell-Koch, mitchelj@emporia.edu. Dates: July 3-14, 9:00am-12:20pm. Two credit hours.

ES 555 Small-Format Aerial Photography

The course will combine state-of-the-art photographic techniques with computer hardware and software for processing small-format air photos. The emphasis will be on practical field-based exercises using kite aerial photography. Weeks one and two (June 5-16) will be scheduled for field trips; the remainder of the range of course dates through July 28 will be utilized for online lectures and lab exercises at a self-determined pace. Available for on-campus (ES 555) or distance-learning (ES 555 XA or ZA) students; see http://academic.emporia.edu/aberjame/airphoto/ Instructor: Dr. James Aber. Dates: June 5-July 29; 9am to 4pm June 5-16. Three credit hours.

PS 500A NASA K-8 Space Science Education Workshop

Learn from a NASA aerospace education specialist from Johnson Space Center about the science that excites many students. This workshop, which is designed for K-8 inservice and preservice teachers, will provide “space science” content background, hands-on learning, and make-and-take opportunities. Participants will develop/select activities to integrate into their curricula (or plan for such). Contact: Dr. DeWayne Backhus for additional information, or for application information regarding the availability of up to 10 tuition stipends (from NASA Space Grant Funds) for inservice teachers. Dates: June 26-30, 9:00am-4:00pm. Two credit hours.

PS 500 PA Modeling in Middle School Physical Sciences and Mathematics – II

Emporia State and Fort Hays State universities are again offering concurrent sessions of a workshop for middle school science and mathematics teachers. The workshops, in their second of three years of funding by No Child Left Behind legislation through the Kansas Board of Regents, are designed to improve instructional pedagogy by incorporating the modeling cycle, inquiry methods, critical and creative thinking, cooperative learning, and effective use of classroom technology in instruction. Summer 2006 participants will increase their mastery of content in the structure of matter, energy, and scientific thinking skills. They will also work in teams to develop modeling units aligned to state and national chemistry standards appropriate for middle school learners. Workshop dates are July 10-27, 8:30-4:00, M-Th. Grant funding covers tuition for three hours graduate credit, a stipend, on-campus housing and a classroom technology package. Enrollment is limited. For application information, contact Dr. Malonne Davies, daviesma@emporia.edu.

Graduate Program for Physical Sciences Teachers

The ESU Departments of Physical Sciences offer a summer-based master's degree program in the physical sciences. This program can normally be completed in four full-time summers (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 thompsock@emporia.edu or backhusd@emporia.edu.