

Teacher Enhancement Program for K-12 Educators

AT THE COLORADO SCHOOL OF MINES



FALL 2015

COLORADO SCHOOL OF MINES

Teacher Enhancement Program

Fall 2015

REGISTRATION

All of the courses announced in this brochure are coordinated through the Office of Special Programs and Continuing Education at the Colorado School of Mines. **Unless another organization or individual is specified as the registration contact in a course listing, enrollment forms and tuition checks/credit card information should be mailed or faxed to:**

Teacher Enhancement Program
Colorado School of Mines
1600 Jackson St., Suite 160A
Golden, CO 80401
(303) 277-8683 FAX
(303) 279-3855

Visit our home page at:
<http://te.csmspace.com>

You must pre-register at least 48 hours prior to the start of a workshop (Saturday and Sunday excluded). Do not show up for a class without a confirmed registration from the Teacher Enhancement Office or person/organization taking the registrations. You are likely to be turned away by the instructor. CSM reserves the right to assign audit (non-credit) status with full tuition responsibility to walk-in participants.

TUITION AND REFUND POLICIES

Registration through Teacher Enhancement must be accompanied by full tuition payment by check or credit card authorization. If a course registrant cancels or transfers an enrollment, the tuition amount **minus** a \$25 cancellation/transfer fee will be refunded or applied to another course. Unless otherwise indicated, you must cancel at least 48 hours in advance of a workshop to qualify for a refund (Saturday and Sunday excluded). **Once a class has begun, no full or partial tuition refunds will be granted.** Colorado School of Mines reserves the right to cancel a course (usually one week prior to delivery) if the minimum enrollment is not reached (with full tuition refund to registrants). Colorado School of Mines and the Teacher Enhancement Office will not be liable for any other expenses incurred by registrants.

When paying tuition by check, please make out a **separate** check to "CSM Continuing Education" for **each** course and for **each** participant.

ATTENDANCE POLICY

Course participants are expected to attend each class session in its entirety. This includes arriving on time and staying until dismissal. Credit will be granted for a course only when the full contact hour requirements have been met. Missed sessions of a course cannot be made up by attending subsequent offerings of the same class or by completing additional assignments. In consideration of the instructor and other course registrants, **DO NOT** bring children of any age to class under any circumstances.

TRANSCRIPT AND CREDIT INFORMATION

The Teacher Enhancement Office and Colorado School of Mines cannot be responsible for meeting individual deadlines for credits toward teacher licensure and/or salary increases. Official transcripts for current course work can be printed upon written request approximately two weeks after the instructor submits course grades to the Teacher Enhancement Office. Individual letters of completion are not available. Graduate-level semester credit offered for each course is applicable for license renewal in the State of Colorado and is generally accepted elsewhere. The credit is not applicable toward a degree at CSM. Request for Transcript of Record forms can be found at www.mines.edu/Outreach/Cont_Ed/tep15.html.

All policies and requirements stated above are program-wide and not at the discretion of individual instructors. Enrollment in any course offered for CSM credit implies your agreement to comply with program policies and requirements.

All courses offered in cooperation with the Extended Studies Program of the Colorado Commission on Higher Education

Fall Course Offerings

CLIMATE CHANGE IN THE ROCKIES (K-12)

CT-1322-15F
0.5 semester credit hour
Date: September 5
Time: 8:30am-4:30pm
Location: Rocky Mtn. Conservancy, Estes Park
Instructor: Tim Kittel
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$70

Over the past few decades, climate has been changing in Rocky Mountain National Park. Explore how montane forests through alpine tundra are vulnerable to a shifting climate. Consider the complex ecological-climate interactions that affect the plants, birds, mammals, and aquatic systems in the Park. Discuss uncertainties in our understanding of natural systems, and how these may be dealt with in the management of park resources.

To register or for more information, contact:

Rachel Balduzzi, Rocky Mtn. Conservancy
970/586-3262
rachel.balduzzi@rmconservancy.org

PERSEVERING PIKA: SECRETS OF ALPINE SURVIVAL (K-12)

CT-1534-15F
0.5 semester credit hour
Date: September 5
Time: 8:30am-5:00pm
Location: Rocky Mtn. Conservancy, Estes Park
Instructor: Chris Ray
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$70

Have you ever wondered how non-hibernating animals like yourself might fare trying to survive in the alpine year-round? Watch the American pika demonstrate its survival strategy. Pikas and their hibernating neighbors, yellow-bellied marmots, chipmunks, and squirrels, are easy to watch in the summer and fall as they forage among the alpine wildflowers. Learn how to spot different animals behaviors that provide clues to how each survives the long, cold winter.

To register or for more information, contact:

Rachel Balduzzi, Rocky Mtn. Conservancy
970/586-3262
rachel.balduzzi@rmconservancy.org

RIVER OTTERS OF RMNP (K-12)

CT-1535-15F
0.5 semester credit hour
Date: September 12
Time: 8:30am-4:30pm
Location: Trail River Ranch, RMNP
Instructor: Merav Ben-David
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$70

Learn about the fascinating lives of the river otters found living near the Colorado River. River otters were extirpated from much of the Southwestern United States by the early 1900s but were subsequently reintroduced into western Colorado from the 1970s to 1990s.

To register or for more information, contact:

Rachel Balduzzi, Rocky Mtn. Conservancy
970/586-3262
rachel.balduzzi@rmconservancy.org

PROTECTING OUR WILDLIFE & WILDLIFE HABITATS (GR 6-12)

CT-1532-15F
0.5 semester credit hour
Date: September 26
Time: 8:45am-5:30pm
Locations: Rocky Mtn. Arsenal & Bluff Lake
Course Coordinator: Mile Sipes
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$20 (includes lunch)

Plant and animal populations are becoming increasingly threatened and endangered due mainly to loss of suitable habitat. Fortunately, there are many organizations that are making a difference in restoring and protecting habitats and the animals found in these habitats. Explore two places in Denver where habitat restoration has made a positive difference in the resident population of plants and animals.

To register or for more information, contact:

Mike Sipes, 303/237-4975
mpsipes@centurylink.net

GEOLOGY & HISTORY-PIKES PEAK GOLD RUSH (GR. 3-12)

CT-1533-15F
0.5 semester credit hour
Date: September 26
Time: 8:00am-6:00pm
Location: Golden (meet at Woolly Mammoth Parking Lot)
Instructor: Michael Johnson
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$85

Learn basic geology concepts, and how that influenced the way precious metals were removed from the ground during the Pikes Peak Gold Rush of '59. Tour an authentic gold mine, pan for gold, and visit Idaho Springs and Central City to learn about their history.

To register or for more information, contact:

Michael Johnson
720/548-0560 or montanamike8@gmail.com

INTRO TO PLANT PHENOLOGY & CLIMATE CHANGE THROUGH PROJECT BUBBURST ONLINE (K-12)

CT-1213-15F
2 semester credit hours
Dates: October 6-November 6
Instructor: Dennis Ward, 720/746-4924
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$35

Obtain detailed information on Project BudBurst (a plant-based citizen science program). Learn how to select your plants and make observations, get suggestions for structuring your classroom involvement, receive activities to engage your students in making observations and analyzing data, as well as forming a community with other educators.

To register or for more information, contact:
<http://citizenscienceacademy.org/courses/csa501>

**USING PROJECT BUDBURST DATA ONLINE
(K-12)**

CT-1274-15F
2 semester credit hours
Dates: October 6-November 6
Instructor: Dennis Ward, 720/746-4924
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$35

Discover an exciting new set of online data visualization tools developed by the National Geographic FieldScope program. Cover plant adaptations to a changing climate, and links between Project BudBurst data and other broad scale data sets.

To register or for more information, contact:
<http://citizenscienceacademy.org/courses/csa502>

**INTRODUCTION TO CITIZEN SCIENCE ONLINE
(K-12)**

CT-1430-15F
2 semester credit hours
Dates: October 6-November 6
Instructor: Dennis Ward, 720/746-4924
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$35

Receive an overview of citizen science, highlighting several existing programs that are targeted towards educators. Explore each of these programs, including how to participate, suggestions for structuring your involvement, education activities to engage your students, as well as forming a community with other educators.

To register or for more information, contact:
<http://citizenscienceacademy.org/courses/csa520>

EcoAdventure Course Offerings

Note: Register for EcoAdventure courses through EcoAdventures. See box below.

ELK BUGLING (K-12)

CT-95105-15F
1 semester credit hour
Dates: September 26-27
Time: 12:00pm-7:30pm
Location: EcoAdventures, Morrison
Instructor: Pam Batton
Tuition Fee: \$155 (**\$175 after Sept. 10th**)

Observe and listen to the bull elk bugling during the mating season. Explore adaptations, behavior, and human/elk interactions through activities and observation. By the end of class, you'll be thinking like an elk and understand the important ecological role of this large herbivore.

BEYOND THE SPIRIT OF 1776: LIFE IN COLONIAL AMERICA (K-12)

CT-1101-15F
1 semester credit hour
Dates & Times:
October 3 (9:00am-5:00pm)
October 4 (9:00am-4:00pm)
Location: CSM campus, Golden
Instructor: Trey Corkern
Tuition Fee: \$155 (**\$175 after September 17th**)

Discover how we built a nation, from before the arrival of the Pilgrims at Plymouth to the fledgling colony's victory over the British Empire. Try your hand at pickling, weaving, blacksmithing, and more.

WILD CANINES OF COLORADO (K-12)

CT-9617-15F
1 semester credit hour
Dates & Times:
October 17 (8:00am-5:00pm)
October 18 (7:30am-2:00pm)
Location: CSM campus, Golden
Tuition Fee: \$165 (**\$185 after October 1st**)

Discover the mischievous coyote, the cat-like canine, red fox, the extirpated wolf, and others. Learn each animal's natural history through hands-on activities and field observation during hikes. Supplement any animal study/ecology curriculum with class topics such as habitat, predator/prey relationships, and populations.

JUST BUTTING HEADS? BIGHORN SHEEP & MOUNTAIN GOATS (K-12)

CT-0757-15F
1 semester credit hour
Dates & Times:
November 7 (9:00am-5:00pm)
November 8 (9:00am-4:00pm)
Location: CSM campus, Golden
Tuition Fee: \$150 (**\$170 after October 22nd**)

Discover why head butting is common among bighorn sheep and rare (but serious) among mountain goats. Learn about unique adaptations for survival in a rugged habitat. Hike into bighorn country as the mating season begins to observe their behavior. Learn why the mountain goat truly is a beast the color of winter.

PUTTING THE COLOR BACK INTO COLORADO – A HISTORY OF MINORITIES IN THE ROCKIES (K-12)

CT-0122-15F
1 semester credit hour
Dates & Times:
November 14 (9:00am-5:00pm)
November 15 (9:00am-4:00pm)
Location: CSM campus, Golden
Instructor: Trey Corkern
Tuition Fee: \$150 (**\$170 after October 29th**)

Examine the other histories that made Colorado: female doctors, African businessmen, Mexican buffalo hunters, Shoshone trappers, geriatric labor leaders, and Comanche traders. Make butter, throw a lariat, and try your hand at tin-smithing.

WILD ABOUT WILDLIFE CRAFTS & LITERATURE (K-6)

CT-9860-15F
1 semester credit hour
Dates & Times:
December 5 (9:00am-5:00pm)
December 6 (9:00am-4:00pm)
Location: CSM campus, Golden
Tuition Fee: \$150 (**\$170 after Nov. 19th**)

Discover some of Colorado's wildlife through crafts, activities, children's literature, and short field trips. Create a craft for each of these species and learn their natural history: cottontail rabbit, Canada goose, red-tailed hawk, porcupine, deer mouse, grasshopper, and spider. Bring a favorite wildlife craft to share.

To register for any EcoAdventures course, mail the CSM enrollment form along with a check payable to EcoAdventures to:

**Pam Batton
EcoAdventures
5894 South Meadow Drive
Morrison, CO 80465
303/697-0327
Fax 303/697-0329
Pamsecoadventures.com**

Registration/Cancellation/Refund Policy

If payments have not been received by the registration deadline (2 ½ weeks before the class), EcoAdventures reserves the right to charge a late registration fee of \$10.00 or delete you from the class and allow a person from the waiting list to take your spot.

If you notify us of a cancellation before the registration deadline, we will refund your tuition less a \$25.00 cancellation fee. If you cancel after the registration deadline, we will refund your tuition less a cancellation fee of \$35.00. If you cancel 48 hours before a class begins, we will refund half of your tuition. If you cancel 24 hours before a class begins or on the day of class or are a no-show to class, no refund will be offered. These fees also apply to class transfers.

Butterfly Pavilion Course Offerings

Note: Register for Butterfly Pavilion courses through the Pavilion. See box below.

BEYOND BUTTERFLIES (K-12)

CT-1536-15F

0.5 semester credit hour

Date: October 3

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructor: Christine Leahy

Tuition Fee: \$35 (**payable during workshop**)

Registration Fee: \$45

What creatures come to mind when you think of invertebrates? Explore the Butterfly Pavilion's newest exhibit, Invertebrate World, to experience learning tools to tap curiosity, design a lesson to use/adapt, and discover incredible invertebrate diversity, butterflies, and beyond.

THE GOOD, THE BAD, THE BUG-LY (K-12)

CT-1521-15F

0.5 semester credit hour

Date: November 7

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructor: Christine Leahy

Tuition Fee: \$35 (**payable during workshop**)

Registration Fee: \$45

What is it about invertebrates that attracts or repels humans? Use inquiry to challenge misconception-based fears and develop a new lens through which to empower you to see and value invertebrates.

To register or for more information, contact:
Butterfly Pavilion Adult Education
720/974-1862
education@butterflies.org
www.butterflies.org/learn

Spring 2016 Course Preview

SANDHILL CRANES, SAND DUNES & HOT SPRINGS (K-12)

CT-1502-16S
1 semester credit hour
Dates: March 5-6
Location: Alamosa
Instructor: Melanie Phelps
Tuition Fee: \$170 (includes entrance fees, credit)

View flocks of majestic Sandhill Cranes as they migrate through the wetlands near Alamosa. Hear their bugling call and watch their graceful mating dance. Learn about efforts to save the Whooping Crane and see many wetland birds. Learn the geology and tour the Sand Dunes and the Rio Grande Rift Zone.

To register or for more information, contact:

Melanie Phelps, 719/252-1789
melaniephe@aol.com
www.coloradorivertrip.com

WHALE SHARKS & WHALES OF BAJA, MEXICO (K-12)

CT-1538-16S
4 semester credit hours
Dates: March 19-27
Location: Baja Peninsula, Mexico
Instructor: Melanie Phelps
Tuition Fee: TBD

Snorkel with Whale Sharks, the world's largest plankton eating fish. Scan for Gray Whales in Magdalena Bay, where whales come to the boats to be touched. Snorkel or dive near Cabo San Lucas to watch Humpback Whales dive, breathe, and breach. Learn migration patterns, and view hundreds of birds.

To register or for more information, contact:

Melanie Phelps, 719/252-1789
melaniephe@aol.com
www.coloradorivertrip.com

LONDON: A ROYAL EXPERIENCE (K-12)

CT-1501-16S
4 semester credit hours
Dates: March 19-27
Locations: London
Instructor: Joyce Webb
Tuition Fee: \$3,570 (includes airfare, lodging, ground transportation, tours, credit)

Experience the Tower of London, see the crown jewels, hear the chimes of Big Ben, hobnob with the tombstones of Westminster Abbey, and visit the National Gallery with priceless works of art. Travel to Windsor Castle, and spend a day visiting Bath and unlock the mystery of Stonehenge.

To register or for more information, contact:

Joyce Webb, 719/229-5482
joycewebb@ymail.com
www.coloradorivertrip.com

COLORADO HISTORY BY TRAIN: DENVER TO GLENWOOD (K-12)

CT-1303-16S
1 semester credit hour
Dates: April 9-10
Location: Denver to Glenwood Springs
Instructor: Melanie Phelps
Tuition Fee: \$490 (includes train fare, lodging, tours, credit)

Ride one of the last passenger trains in America, the Amtrak, from Denver through the historic Moffat Tunnel, Winter Park, Gore Canyon, and into Glenwood Springs. Explore caves and soak in the soothing waters the Ute Indians believed had magical powers. Learn the history of Colorado railroads and how the West was tamed.

To register or for more information, contact:

Melanie Phelps, 719/252-1789
melaniephe@aol.com
www.coloradorivertrip.com

THE SECRET LIFE OF PRAIRIE CHICKENS (K-12)

CT-1537-16S
1 semester credit hour
Dates: April 16-17
Location: Holly to Wray
Instructor: Melanie Phelps
Tuition Fee: \$380 (includes tours to leks and credit)

Tour the mating leks of both the Greater and Lesser Prairie Chickens in eastern Colorado. Strutting, stomping, dancing, and booming, the males compete for female affections. Tour Amache Japanese Internment Camp and Sand Creek Massacre site. Probable sightings of Burrowing Owls, prairie, and shore birds.

To register or for more information, contact:

Melanie Phelps, 719/252-1789
melaniephe@aol.com
www.coloradorivertrip.com

PICKETWIRE DINOSAUR TRACKS BY MOUNTAIN BIKE (K-12)

CT-0350-16S
1 semester credit hour
Dates: May 7-8
Time: 8:00am-5:00pm
Location: LaJunta
Instructor: Melanie Phelps
Tuition Fee: \$140 (includes credit)

Mountain bike 13-miles round trip to see a fossilized Jurassic beach containing over 1300 dinosaur tracks, some big enough to sit in. This important site showed scientists that dinosaurs were herding animals. Tour Old Bent's Fort and view stage coach ruts on the Old Stagecoach Trail. Learn Colorado history from the Jurassic to the Dust Bowl.

To register or for more information, contact:

Melanie Phelps, 719/252-1789
melaniephe@aol.com
www.coloradorivertrip.com

Course Enrollment Form

Please Print

Full Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Social Security Number*: _____ Date of Birth: _____

Telephone: (school) _____ (home) _____

School: _____ Grade Level: _____

Email: _____

When CSM is the registration contact, I prefer to receive a confirmation letter by:

o E-mail: _____

o Fax; fax number: () _____

oMail ***required if taking course for credit**

Are you Hispanic/Latino? Yes/No

Select one or more:

_____ American Indian or Alaska Native

_____ Native Hawaiian or Other Pacific Islander

_____ Asian

_____ White

_____ Black or African American

Indicate the class(es) for which you are registering

Course #	Course Title	Course Dates	Tuition
CT-_____	_____	_____	_____
CT-_____	_____	_____	_____
CT-_____	_____	_____	_____
CT-_____	_____	_____	_____
CT-_____	_____	_____	_____
Total:			_____

Please follow carefully the specific registration instructions which accompany each course listing in this catalog. Many, but not all, listings will direct you to fill out the form above and mail along with the tuition amount to the Colorado School of Mines Teacher Enhancement Program. Please send a separate check for each course, and for each participant.

Make checks payable to CSM Office of Continuing Education unless otherwise noted.

Mail check(s) and application form (unless otherwise noted in course listing) to:

CSM Teacher Enhancement Program
 1600 Jackson St., Suite 160A
 Golden, CO 80401
 FAX: (303) 277-8683
 Phone: (303) 279-3855
<http://te.csmspace.com>