Greetings!

This Summer 2019 Bulletin includes:

1) Summer 2019 Course Information:
   ✔ date, time and place
   ✔ materials and textbooks
   ✔ physical requirements

2) City of Bozeman Information
3) Bozeman and Surrounding Area Activities
4) Restaurants

Diana Paterson, the MSSE Associate Director, coordinates summer campus course registration. She can be reached at dianap@montana.edu or (406) 994-5679. Diana is wonderfully helpful and can answer last minute registration questions.

The MSSE dorms for summer 2019 will be located in the Yellowstone Hall. A single occupancy room is $30 per night, a double occupancy room is $50 per night ($25 per person) and a suite is $35 per night. Dining will be in Rendezvous this summer with breakfast at $8, lunch at $10 and dinner at $11. Pets are not allowed in any campus housing.

For more information visit http://www.montana.edu/cs/accommodations.html

To register for short-term summer housing, please first contact MSU Summer Housing at msusummerhousing@montana.edu and request a password into the system. Then visit the MSSE Summer 2019 webpage to find the Summer Housing Registration link.

If you are in Bozeman for 30 days or longer, you may contact Family and Graduate Housing at fgho@montana.edu, or call (406) 994-3730 for more details. There are a number of housing options for single students and students with families. Please submit your application as soon as possible during the spring semester, as space is very limited.

Other off-campus summer housing options are vacation rentals, hostel, and camping:


www.vrbo.com/vacation-rentals/usa/montana/yellowstone/bozeman

Bozeman Backpacker’s Hostel: treasurestatehostel.com/index.html

bearcanyoncampground.com/    koa.com/campgrounds/bozeman/

MSU does not have an airport shuttle service. Uber and Lyft serve the Bozeman area and might be a better alternative to a cab depending on current rates. All Valley Cab company can be reached at (406) 388-9999.

When you arrive on campus, pick-up your “CAT Card” in the Hedges Complex room 31, below Miller Dining Hall. The CAT Card is your library card, gym pass, and debit card (if you deposit funds on account). For more information visit http://www.montana.edu/catcard/students.html#get
If you are taking field classes this summer, you will need clothing and footwear appropriate for mixed-weather and rugged terrain. Several classes will travel into high altitude backcountry areas where dressing in layers for changing weather conditions is critical. For any trip into the mountains, carry plenty of water, snacks (lunch for all day outings), hat, sunscreen, sunglasses, insect repellant, rain/wind protective jacket, warm layer of clothing, a daypack and solid hiking shoes or boots. Also, be prepared with a notebook, pencil & pens. Binoculars are encouraged. Specific course requirements are enclosed. If you require an accommodation because of a disability, please contact the MSSE Office.

Questions regarding federal financial aid eligibility and completion of the Free Application for Federal Student Aid (FAFSA) should be directed to the Office of Financial Services at Montana State University (phone 406-994-2845). General financial aid information is available at www.montana.edu/wwwfa

Everyone is invited to attend the Twenty First Annual Symposium in Science Education, July 1st – 5th 2019 in Jabs Hall, rooms 311 and 415. The symposium is open to the public and includes Capstone Project Presentations by the 2019 MSSE degree candidates. Capstone orientation for graduate candidates will be held July 1st, 7:30-8:30 am in Reid Hall, room 105. The 2019 Graduation Reception is scheduled for Friday, July 5th. 6pm-8pm. This celebration is a social for all MSSE students, alumni, family, friends and faculty to honor graduates. A request for RSVP numbers from graduates will be sent out late spring.

Social Schedule

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Place</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Tuesday, June 18</td>
<td>7:30-8 am</td>
<td>451 Reid Hall</td>
<td>Question and Answer Sessions</td>
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<tr>
<td>Tuesday, June 25</td>
<td>7:30-8 am</td>
<td>451 Reid Hall</td>
<td>Come meet your peers and enjoy some coffee, juice and bagels</td>
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<tr>
<td>Monday, July 1</td>
<td>7:30-8:30 am</td>
<td>Reid Hall 105</td>
<td>Capstone Orientation</td>
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<tr>
<td>Thursday, July 4</td>
<td>11 am-5 pm</td>
<td>Hyalite Canyon</td>
<td>BBQ &amp; Recreation (optional)</td>
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<tr>
<td>Friday, July 5</td>
<td>6-8 pm</td>
<td>SUB Ballroom</td>
<td>Graduation Reception</td>
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<tr>
<td>Tuesday, July 9</td>
<td>7:30-8 am</td>
<td>451 Reid Hall</td>
<td>Question and Answer Sessions</td>
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<tr>
<td>Tuesday, July 16</td>
<td>7:30-8 am</td>
<td>451 Reid Hall</td>
<td>Come meet your peers and enjoy some coffee, juice and bagels</td>
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Feel free to contact us with any questions or concerns. We look forward to seeing you this summer when you arrive on campus. Be sure to stop by Reid Hall Room 451 to visit!

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Welcome to Bozeman!

Home of Montana State University, Bozeman is located in the heart of the scenic Gallatin Valley and is renowned for its summer activities. Surrounded by four mountain ranges, thousands of acres of national forest, and hundreds of miles of blue ribbon trout streams, the area offers endless recreation opportunities such as:

- Hiking & backpacking
- Rock climbing
- Mountain biking
- Fly fishing
- River rafting, kayaking, canoeing, and paddle boarding
- Wildlife viewing
- Photography
- Yellowstone National Park

Bozeman’s climate reflects its mountain valley location. Summers are pleasant with warm days, cool nights, and an abundance of sunshine. City attractions include quaint shopping experiences, restaurants and coffeehouses, and museums. Ten city parks with picnic and playground areas, tennis courts, indoor and outdoor swimming pools, skateboard facilities and BMX bike park, several golf courses in the city and surrounding areas. bozeman.net

Campus Facilities

Parking Permits
You will need to purchase a permit if you plan to park a car on campus. Daily passes can be purchased for $5 per day and are available at the University Police Department or at Yellowstone Hall. montana.edu/parking

Campus Maps:
montana.edu/campusmap

Hosaeus Fitness Center
Guest passes are available for $8 per day or $22 per week. Facility features pool, free weights area, climbing wall, group fitness classes, tennis courts, racquetball courts, indoor running track, cardio area, saunas, and locker rooms. Closed on the 4th of July. montana.edu/getfit

MSU Recreation Center
A social gathering place, bowling, billiards, foosball, videos, tournaments, and classes. Located in the MSU Strand Union Building. montana.edu/subrec

Outdoor Recreation Program
ASMSU’s Outdoor Recreation Program (406-994-3621) offers equipment rentals, coordinated group outings, an outdoor resource center. Students and their families are eligible to rent equipment. Rafts, canoes, paddleboards, tents, bicycles and other outdoor gear are available. Rates are based on half-day, daily, or weekends. Maps, magazines, trail guides, and informational materials are available. This is a great option for equipment rentals for your summer field courses. montana.edu/outdoorrecreation
Community Services and Activities

**Phasmid Rentals**
You can also rent gear (and vehicles if you want to plan a trip) from Phasmid Rentals (406-922-0179). They are located near the airport and specialize in any item you might need for your Montana stay. They even rent bear spray! [phasmidrentals.com](http://phasmidrentals.com)

**Bozeman City Bus Service**
Streamline Bus Company moves people around Bozeman or the Gallatin valley quickly and conveniently and best of all, riding on Streamline is free. Routes stretch from the MSU campus to downtown and surrounding communities. Brochures are available at the “ASK US” Information Center in the MSU Strand Union Building. [streamlinebus.com](http://streamlinebus.com)

**Museum of the Rockies**
The world-renowned Museum of Rockies features one of the finest paleontology collections in North America. The museum offers 2-Day and week-long summer camps for children, grades 1st through 5th. Camp activities will focus on paleontology, astronomy and space. The museum also has a discovery center for younger children ranging in age from infant to 6 years. [museumoftherockies.org](http://museumoftherockies.org)

**Children’s Museum of Bozeman**
A great place for little ones to play and learn. The museum is open Monday to Saturday 10:00 am to 5:00 pm. [cmbozeman.org](http://cmbozeman.org)

**Bozeman Recreation Department**
This Bozeman Recreation Department offers a variety of programs, special events and recreation classes such as soccer, cooking, Castles & Knights, basketball, canoeing and Kayaking, Nature Discovery, Outdoor Adventure Skills and more. Also find information on The Bozeman Swim Center and Bogert Pool. [bozeman.net](http://bozeman.net)

**Gallatin Valley YMCA**
Much more than just a gym, the Gallatin Valley YMCA offers a wide array of programs enabling people of all ages to connect, learn, live healthily and have fun. From youth sports to yoga, pre-school classes to parent's night out, FREE family events to fun after-school programs, the Y offers something for everyone. [gallatinvalleymca.org](http://gallatinvalleymca.org)

**Bozeman Public Parks**
The city is loaded with wonderful public parks. One special park for smaller children is the Dinosaur Park. It is a great place to soak up some sunshine, picnic, and play. [dinosaurplayground.org](http://dinosaurplayground.org)

**Shakespeare in the Parks**
Montana Shakespeare in the Parks is a theatrical group presenting live, professional theatre productions in the MSU Park. [montana.edu/shakespeare](http://montana.edu/shakespeare)

**Music Events**
Music on Main occurs every Thursday evening, July – mid August; from 6:30 pm to 8:30 pm. Downtown Bozeman comes alive by featuring a different musical group from an eclectic range of talent. Local restaurants and food vendors join the festival by providing an assortment of dinner options, drinks, and treats.

**Farmers Market with Arts and Crafts**
**Bogert Farmer’s Market**
Gather, socialize, and share with others the Bogert Farmers’ Market held every Tuesday evening from 5:00 pm to 8:00 pm. Locally grown produce, arts, crafts, music, food, family activities and more are featured at Bogert Park off South Church Avenue.
**Gallatin County Fairgrounds**
Every Saturday morning from 9:00 am to 12:00 noon (June-September) at the Gallatin County Fairgrounds, join the public and enjoy fresh fruit and vegetables, baked goods, arts and crafts.

**Downtown Art Walk**
The second Friday of the month from June through August from 6:00 pm to 8:00 pm, stroll downtown while the art galleries and shops stay open late to showcase featured artists.

**Bozeman Bowl**
Open every day from 9:00 am until late. Located at: 414 E Babcock Street. Call 406.586.5018 for more information.

**Gallatin County Fair Grounds**
The Big Sky Country Fair, formally Gallatin County Fair, runs July 17th through the 21st. The 5 day event includes: The Bozeman Roundup Ranch Rodeo, Dog Dock Diving, Pig Wrestling, Mutton Bustin, Arts & Crafts Shows, Livestock Shows, and classic fair cuisine. gallatincountyfair.com

**Spire Climbing Center**
An 18,000+ square foot state of the art roped climbing center for youths and adults. spireclimbingcenter.com

**Websites for Outdoor Activities**

Gallatin National Forest: fs.fed.us/r1/gallatin

Montana Fish, Wildlife & Parks: fwp.mt.gov

Bozeman Chamber of Commerce website contains information on the Bozeman area activities including backpacking, horseback riding, fly fishing, golfing, shopping, hiking, biking, and Yellowstone National Park information: bozemanchamber.com

**Bozeman Area July 4th Events**

**Bozeman**
Watch the fireworks at the Bozeman Fairgrounds. Starting at 9:00 pm, head to the fairgrounds for food and music, and then watch one of the largest firework displays in Montana at dusk. Another favorite spot to watch the fireworks is on top of Peet’s Hill/Burke Park.

**Livingston**
The Livingston Roundup Rodeo begins on July 2nd and runs through the 4th. This 3 day festival kicks off with a parade down Main Street. Professionals and amateurs from around the country gather for the rodeo and compete. For rodeo ticket information, visit: livingstonroundup.com

**Big Sky**
Music in the Mountains: Free July 4th events (music, vendors, and fireworks) at Center Stage at Town Center Park in Big Sky. Event begins at 6pm at the Center state at Town Center Park. For more information: bigskyarts.org
Area Hot Springs

**Bozeman Hot Springs**
For more information: bozemanhotsprings.com

**Chico Hot Springs**
For more information: chichotsprings.com

**Norris Hot Springs**
For more information: norrishotsprings.com

Area Attractions

**Yellowstone National Park**
Only a 1 1/2 hour drive from Bozeman, a day trip to Yellowstone is an unforgettable activity when visiting the area. Find all the information you need here: nps.gov/yell

**Grizzly & Wolf Discovery Center**
A wildlife park and educational facility located in West Yellowstone. The center allows you to observe Grizzlies playing in a waterfall, fishing in their ponds, and see the social structure of two wolf packs. grizzlydiscoveryctr.org

**Local Hiking Trails**
Find information about beautiful day hikes and other local recreation through the Outside Bozeman: outsidebozeman.com/places/trails

**Missouri Headwaters State Park**
Visit the confluence of the Jefferson, Gallatin, and Madison Rivers that come together to start the great Missouri River. Find information on Lewis & Clark Caverns, Buffalo Jump State Park and much more. stateparks.mt.gov/missouri-headwaters
Summer 2019 Campus Course Information

BIOE 520 Understanding & Managing Animal Biodiversity in the Greater Yellowstone Ecosystem

BIOE 522 Birds of Prey of the Greater Yellowstone Ecosystem

BIOE 523 Wildlife Ecology of the Northern Rocky Mountains

BIOE 593 Alpine Ecology

BIOE 596 Land Use Issues in the Greater Yellowstone Ecosystem

CHMY 594 Science Lab Safety and Risk Management

CSCI 582 Computer Science in the Classroom: The Joy and Beauty of Data

EELE 508 Solar Cell Basics for Science Teachers

ERTH 516 Northern Rocky Mountain Geology

ERTH 594 Geology Seminar: Geology of Earthquakes

ERTH 596 Geology of Glacier National Park

GEO 521 Dinosaur Paleontology I

GEO 522 Dinosaur Paleontology II

GEO 585 Mineralogy for Teachers

LRES 557 Thermal Biology in Yellowstone Park

LRES 569 Ecology of Invasive Plants in the Greater Yellowstone Ecosystem

LRES 586 Lake Ecology

MSSE 575 Professional Capstone Paper and Symposium in Science Education

MSSE 591 Statistics Bootcamp for Capstone Projects

MB 538 Cell and Molecular Biology

PHSX 401 Physics by Inquiry I

PHSX 402 Physics by Inquiry II

PHSX 596 Teaching Electricity and Magnetism Using Research-based Curriculum

PSPP 548 Flowering Plants of the Northern Rocky Mountains

PSPP 549 Plants, People, Health
**Summer 2019 Campus Course Information**

*Course meeting times and locations subject to change.*

**June 17-21, 2019**

**BIOE 520 Understanding & Managing Animal Biodiversity in the Greater Yellowstone Ecosystem (2 cr)**
Class: M 8:30 am to 12 Noon; Lunch break; Afternoon Field Trip 1:00 to 5:00 pm
Location: Lewis Hall, Room 304
Field Trips: TWRF 8:00 am – 5:00 pm
Instructor: Jay Rotella, MSU Ecology Department

**Textbook Requirement:** Materials provided by instructor.

**Physical Fitness Requirement:** Field trips require walking up to 2 miles on moderate slopes on established trail

**PSPP 549 Plants, People, Health (2 cr)**
Class: MTWRF 9:00 am to 4:00 pm
Location: Plant Growth Center, Room 214
Field Trips: T 9:00 am to 1:00 pm
Instructor: Robyn Klein, MSU Plant Sciences and Plant Pathology Department

**The following book is recommended:**
Author: James Green
Publisher: Clarkson Potter/Ten Speed/Harmony

**June 24-28, 2019**

**BIOE 523 Wildlife Ecology of Northern Rocky Mountains (2 cr)**
Class: M 8:00 am - 4:00 pm
Location: Lewis Hall, Room 407
Field Trips: Depart at 9:00 am Tuesday for 3 nights, return Friday by 4:00pm
Instructor: Dave Willey, MSU Ecology Department

**Textbook Requirement:** Materials provided by instructor.

**Students are expected to provide the following minimum equipment for their camping needs:**
Clothing: A layering system that can be shed from cold to hot temps, including hats (to keep warm, but also protect from sun), insulation (down, or fiberfill jacket), rain/wind protection (wind jacket and pants), layers that will match the changing conditions. Comfortable hiking shoes as well as camp shoes/sandals. We will encounter trails with mud, water, brush, etc, that travel up and down the mountain. Day Pack (with lots of room for extra snacks, water, and clothes layers. Typical gear for a wildlife survey/day like: binoculars, 2-liters of water; food bag, headlamp/spare batteries (for any evening surveys), notepad field journal, pens, map of the park (I like the Trails Illustrated YNP map), Bear Spray, and a personal first aid kit.) Headlamp - I like the ones with LED lamp with high/low beam, and a red light (Petzel makes some great ones!). Water bottle. I suggest you bring a 2-liter water bottle or a CamelBack water bladder system (my favorite). Sleeping bag and ground pad. I take a lite-weight down bag rated to freezing. Sunscreen, Bug juice (mosquitoes are out!), Camera, Bear spray (any size will do!) We will review bear safety!

**Binoculars (mandatory to see wildlife!)**

**Physical Fitness Requirements:** The course requires moderate outdoor physical activity. Students are expected to walk several miles, often in relatively steep terrain without established hiking trails. Please contact the MSSE office before signing up for this class if you have concerns about the required physical fitness level and your ability to meet these requirements.

**PHSX 596 Teaching Electricity and Magnetism (2 cr)**
Class: MTWRF 9:00 am - 5:00 pm
Location: AJM Johnson Hall 147
Instructor: Greg Francis, MSU Physics Department

**Textbook:** Materials provided by Instructor
June 24-29, 2018 (cont.)

PSPP 548 Flowering Plants of the Northern Rocky Mountains (2 cr)
Class: MT 9:00 am to 4:00 pm
Field Trips: WRF 9:00 am to 4:30 pm
Location: Plant Growth Center, Room 214
Instructor: Robyn Klein, MSU Plant Sciences and Plant Pathology Department

Textbook Requirement:
Author: Harris, James and Harris, Melinda
Title: Plant Identification Terminology: An Illustrated Glossary
Publisher: Spring Lake Publishing
ISBN #: 978-0964022164
Text available through MSU Bookstore (888)-247-2546
Physical Fitness Requirement: Field trips require walking up to 2 miles on moderate slopes.

June 24-29, 2019

GEO 521 Dinosaur Paleontology I (2 cr)
Class: MTWRFS Depart Monday 8:00 am for Field Camp at Makoshika State Park and return Saturday evening.
Location: Meet van at MSU Strand Union Building, South Entrance
Instructor: Dan Lawver, MSU Earth Sciences Department

Textbook Requirement: Materials provided by instructor.
Facilities: Individual cabins that are rustic but completely furnished and accommodate 4-6 students, a lodge where meals will be provided, and a separate shower house with toilet facilities. Students should bring a sleeping bag or other bedding and personal items such as towels, showers shoes, etc. Space for tent camping is also available. Special dietary requirements should be noted on the registration form. Students should have appropriate hiking boots and be prepared for rain and cool weather. Additional required items include backpack, field notebook and pencils, and water containers (3-4 liters total capacity).

Physical fitness requirements: The course requires moderate to strenuous outdoor physical activity. Students are expected to walk several miles, at a reasonable pace in order to keep up with the group, often in relatively steep terrain without established hiking trails. Temperatures are often in the 90º F range. Please contact the MSSE office before signing up for the class if you have concerns about the required physical fitness level and your ability to meet these requirements.

June 29, 2019

MSSE 591 Statistics Bootcamp for Capstone Projects (1 cr)
Class: 8:00 am to 5:00 pm
Location: Jabs Hall 311
Field Trips: None
Instructor: Terrill Paterson, Department of Ecology, MSU Bozeman and Montana Fish, Wildlife and Parks

Textbook Requirement: Materials provided by instructor

July 1-5, 2019 (No Classes July 4th)

BIOE 596 Land Use Issues in Greater Yellowstone Ecosystem (2 cr)
(Symposium presenters cannot take this course)
Class: M 8:00 am to 1:00 pm
Location: Lewis Hall 407
Field Trips: M 1:00 pm to 5:00 pm, TWF 8:00 am- 6:00 pm
Instructor: Jerry Johnson, MSU Political Science and Ecology Departments

Textbook Requirement: Materials provided by instructor

CHMY 594 Science Lab Safety & Risk Management (1 cr)
Class: MTWF 1:00 pm to 4:00 pm
Location: Chemistry and Biochemistry Building Room #3 (CHBCH #3)
Instructor: Steve Holmgren, MSU Chemistry Department

Textbook Requirement: Materials provided by instructor
**July 1-5, 2019 (cont.) (No Classes July 4th)**

**EDCI 575 Professional Capstone Paper and Symposium in Science Education (3 cr)**  
(Graduate Candidates Only)  
Class: MTWF 7:00 am to 6:00 pm  
Orientation: Reid Hall 105  
Presentations: Jabs Hall 311 & 415  
Instructor: Greg Francis, MSSE Director  
**Textbook Requirement:** None

**EDCI 575 Professional Capstone Paper and Symposium in Science Education (3 cr)**  
(Graduate Candidates Only)  
Class: MTWF 7:00 am to 6:00 pm  
Orientation: Reid Hall 105  
Presentations: Jabs Hall 311 & 415  
Instructor: Greg Francis, MSSE Director  
**Textbook Requirement:** None

**July 8-12, 2019**

**BIOE 522 Birds of Prey (2 cr)**  
Class: M 8:00 am to 5:00 pm, TWF 8:00 am to 1:00 pm  
Location: Lewis Hall, Room 407  
Field Trips: TW 1:00 to 5:00 pm, R 8:00 am to 5:00 pm, F 1:00 to 4:00 pm  
Instructor: Dave Willey, MSU Ecology Department  
**Textbook Requirement:**  
Author: Dunn and Alderfer  
Title: *National Geographic Field Guide to the Birds of North America, Sixth Edition*  
Publisher: National Geographic; 6 Rev Upd edition (November 1, 2011)  
ISBN: 9781-4-26-20828-7  
**Physical Fitness Requirement:** Field trips require walking up to 2 miles on moderate slopes.

**EELE 508 Solar Cell Basics for Science Teachers (2 cr)**  
Class: MTWRF 8:00 am- 5:00 pm  
Location: Cobleigh Hall, Room 632  
Field Trips: None  
Instructor: Todd Kaiser, MSU Electrical Engineering Department  
**Textbook Requirement:** Materials provided by instructor.

**LRES 557 Thermal Biology in Yellowstone Park (2 cr)**  
Class: MTWRF 9:00 am to 5:00 pm  
Location: Gaines Hall Room 143  
Field Trip: Depart Tuesday 8:00 am; Return Wednesday 6:00 pm (Tent camping)  
Instructor: Dana Skorupa, MSU Center for Biofilm Engineering  
**Textbook Requirement:** Students to purchase book from instructor ($20)  
**Students are expected to provide the following minimum equipment for their camping needs:**  
Sleeping bag and pad, personal toiletries, sunglasses, hat, daypack, water bottle, sunscreen, camera, field notebook and pen, etc.  
Clothing for hot and cold weather (warm hat and coat, shorts and sun hat). Good hiking shoes (no open toed shoes).  
**Physical fitness requirement:** Field trips will require walking distances of up to 5 miles with moderate slopes at high elevation (7000 ft.) and will involve being in the field for the majority of the day. Weather may vary!

**LRES 569 Ecology of Invasive Plants (2 cr)**  
Class: MTWRF 8:00 am to 5:00 pm  
Location: ABB Hall Room 238 from 8:00 am to 11:00 am; ABB 234 from 12 pm to 5:00 pm  
Field Trips: Daily  
Instructor: Bruce Maxwell, MSU Land Resources and Environmental Science Department  
**Textbook Requirement:** Materials provided by instructor.

**PHSX 401 Physics by Inquiry I (3 cr) (1st of 2 weeks)**  
Class: MTWRF 9:00 am to 5:00 pm  
Location: AJM Johnson Hall 147  
Instructor: Ben Spicer and Dr. Gregory Francis, MSU Physics Department  
**Textbook Requirement:**  
Author: McDermott and Shaffer  
Title: *Physics by Inquiry, Volume 2*  
Publisher: Willey  
ISBN #: 9780471548706  
Text available through MSU Bookstore (888)-247-2546
July 8-12, 2019 (cont.)

PHSX 402 Physics by Inquiry II (3 cr) (1st of 2 weeks)
Class: MTWRF 9:00 am to 5:00 pm
Location: AJM Johnson Hall 137
Instructor: Ken Taylor and Dr. Greg Francis, MSU Physics Department
Textbook Information:
Author: McDermott and Shaffer
Title: *Physics by Inquiry, Volume 1 & 2*
Publisher: Wiley
ISBN #: 9780471548706
Text available through MSU Bookstore (888)-247-2546

July 15-19, 2019

BIOE 593 Alpine Ecology (2 cr)
Field Trip: M-F Depart 6:00 am – Return Friday pm. Overnight stay in an alpine setting. (Prior to start of course, instructor will provide information regarding meeting and departure times on D2L)
Location: Monday 6:00 am meet van at MSU Strand Union Building, South Entrance.
Instructor: John Winnie, MSU Ecology Department
Textbook Information: Course materials provided by instructor online in D2L by June 15.
Physical Requirements: Field days will be long (up to 10 hours) and sometimes strenuous. Students must be prepared to spend the better part of 5 days hiking and doing fieldwork in rugged terrain at high elevations (7000 to 9000’+). Those coming from low elevation areas are encouraged to arrive 7 to 10 days early and spend that time at or above 5000’ to acclimatize before class begins. (Most of Yellowstone Park is above 6000’.) **Students must carry and know how to use, the following field gear:** A loud whistle, day pack, bear repellant, all-weather hiking boots (above the ankle, no tennis shoes), light weight rain gear, mid weight fleece/wool pullover/or sweater, hat, sun screen (UV radiation at high elevation is much more intense than at sea level), high energy snack food and a lunch to keep you going for a full day in the field (All food should be double-bagged in zipper-style bags), 1 or 2 1L water bottles or a Camel-back style bladder with drinking hose, first aid kit, headlamp or flashlight with spare batteries, binoculars, field notebook and pencils (Rite- in-the-Rain, or similar notebooks are best), compass, and if you have one, a GPS. Personal toiletry and first aid kit containing any necessary medications.
If you have a **medical condition** that could present as an emergency in the field, you must notify the MSSE program before signing up for this class. We will be in a remote area with unreliable cell service, so emergency services will be delayed. Equipment can be rented at the Outdoor Recreation Program on campus: [http://www.montana.edu/outdoorrecreation](http://www.montana.edu/outdoorrecreation)

ERTH 516 Northern Rocky Mountain Geology (2 cr)
Class: MTWRF 8:00 am to 5:00 pm; Daily field trips, departure 8:00 am.
Location: Meet van at MSU Strand Union Building, south entrance
Instructor: Dave Lageson, MSU Earth Sciences Department
Textbook Required: Materials provided by instructor
Physical fitness requirements: In order to study the geology of southwest Montana in the field, this course will involve moderate outdoor physical activity. Many of our stops will be at outcrops by the side of the road (involving very little hiking), but in some instances we will need to hike in order to visit key outcrops and/or make key geologic observations. Most hikes will be fairly short (less than 5 miles) and on reasonably well developed trails, but off-trail hiking may also be necessary. Furthermore, the hiking terrain may be steep and rocky at times; Elevations will range from 5,000 to 9,000+ ft. Interested students should contact Diana in the MSSE office to register for the course and to communicate their ability to meet the physical fitness requirements for the course. Please email Diana at dianap@montana.edu.

GEO 522 Dinosaur Paleontology II (2 cr)
Class: MTWRF, Depart Monday 8am for Field Camp at Egg Mountain, Choteau, MT, Return Friday night.
Location: Meet van at MSU Strand Union Building, South Entrance
Instructor: Dan Lawver, MSU Earth Sciences Department
Textbook Requirement: Materials provided by instructor.
Facilities: Students will be camping with the regular paleontology field crew under rustic conditions. Please provide your own tent, sleeping bag, and thermarest. These items can be rented through the MSU Outdoor Recreation Center. Cooking equipment and dishes are provided, and a travel trailer is used for meal preparation. Toilet facilities are limited to outhouses. Showers are available in town. Students should have appropriate hiking boots and be prepared for rain and cool weather. Additional required items include backpack, field notebook, pencils, and water containers (3-4 liters total capacity).
Physical fitness requirements: The course requires moderate outdoor physical activity. Students are expected to walk several miles on unestablished hiking trails. Temperatures are often in the 90 degree range. Please contact the MSSE office before signing up for this class if you have concerns about the required physical fitness level and your ability to meet these requirements.
July 15-19, 2019 (cont.)

MB 538 Cell and Molecular Biology (2 cr)
Class: MTWRF 8:00 am to 5:00 pm
Location: Lewis Hall 201
Field Trips: None
Instructor: Dr. Delisha Patel, MSU Microbiology Department
Textbook requirement: None

PHSX 401 Physics by Inquiry I (3 cr) (2nd Week)
Class: MTWRF 9:00 am to 5:00 pm
Location: AJM Johnson Hall 147
Instructor: Ben Spicer and Dr. Greg Francis, MSU Physics Department
Textbook Requirement: See 1st week

PHSX 402 Physics by Inquiry II (3 cr) (2nd Week)
Class: MTWRF 9:00 am to 5:00 pm
Location: AJM Johnson Hall, Room 137
Instructor: Ken Taylor and Dr. Greg Francis, MSU Physics Department
Textbook Information: See 1st week

July 20, 2019

ERTH 594 Geology Seminar: Geology of Earthquakes (1 cr)
Class: Sat 8:00 am to 5:00 pm
Location: Meet van at MSU Strand Union Building, South Entrance
Instructor: Dave Lageson, MSU Earth Science Department
The course will feature a daylong trip to the famous Hebgen Lake earthquake site in the southern Madison Range. Hiking shoes, pay pack, lunch, water bottle, jacket and/or rain gear, field notebook (and pens), and personal items for a day-long field trip are all required.

July 21, 2019

GEO 585 Mineralogy for Teachers (1cr)
Class: Sat 8:00 am to 5:00 pm
Location: Gaines Hall 143
Instructor: Dave Lageson, MSU Earth Science Department
Textbook Requirement: Materials provided by instructor.

July 21-26 2019

ERTH 596 Geology of Glacier National Park (2 cr)
Class: Welcome BBQ Saturday 22nd 6:00 pm, SuMTWRF
Location: Meet van at MSU Strand Union Building, south entrance
Field trip: Depart Sunday morning for Glacier National Park, return Friday mid-day.
Instructor: Callan Bentley, Assistant Professor of Geology, NVCC
Textbook requirement: Materials provided by instructor
Physical fitness requirements: In order to study the field geology of Glacier National Park, this course will involve very strenuous outdoor physical activity. Students are expected to hike several miles at high elevations in rough, rocky, mountainous terrain in order to accomplish course goals, namely hands-on field experience with geologic observations and interpretations. Please contact the MSSE Office before signing up for this class if you have concerns about the required physical fitness level and your ability to meet the expectations of this course. If you require an accommodation because of a disability, please contact the MSSE Office.
July 22-26, 2019

CSCI 582 Computer Science in the Classroom: The Joy and Beauty of Data (2 cr)
Class: MTWRF 8:00 am to 5:00 pm
Location: EPS 254
Field Trips: None
Instructor: John Paxton, Computer Sciences
Textbook Requirement: Materials provided by instructor.

LRES 586 Lake Ecology (2 cr)
Class: ABB 238, MTWRF 9:00 am to 5:00 pm
Field Trip: Tuesday & Wednesday
Instructors: Stephanie McGinnis, MSU Land Resources and Environmental Science Department
Textbook Requirement: Materials provided by instructor.
The course will feature a day trip to Yellowstone National Park Tuesday and Hyalite Reservoir on Wednesday. Participants should anticipate some short treks and be prepared for any type of weather while in the field.
Where to eat while in Bozeman....

Restaurants in the Historic Downtown Area

14 North- 14 N. Church Ave. Montana Ale Works - 611 E. Main St.
Blackbird – 140 E. Main St. Nova Café – 312 E. Main St.
Burger Bob’s – 39 W. Main St. Open Range- 241 E. Main St.
Cateye Café – 23 N. Tracy Ave. Pita Pit – 246 E. Main St.
Copper – 101 E. Main St. Plonk – 29 E. Main St.
Emerson Grill – 207 W. Olive St. Rice- 140 E. Main St.
Feed Café – 1530 W. Main St. Seven Sushi – 113 E. Oak St.
Fresco Café – 317 E. Mendenhall St. Starky’s – 24 N. Tracy Ave.
Garage – 451 E. Main St. Sweet Chili Asian Bistro – 101 E. Main St.
Jam Fusion Café – 25 W. Main St. Tacos Del Sol- 17 S. Tracy Ave.
MacKenzie River Pizza – 232 E. Main St. Ted’s Montana Grill – 105 W. Main St.
Map Brewing – 510 Manley Rd.

Restaurants within Walking Distance of Campus

Columbo’s Pizza and Pasta – 1003 W. College St. South 9th Bistro – 721 S. 9th
Jimmy John’s - 1216 West Lincoln Street
Storm Castle Café - 5 Tai Ln.
Pickle Barrel- 809 W. College St. Taco Montes – 815 W. College St.

Grocery Stores near MSU Campus

Community Food Co-Op – 908 W. Main St. Rosauers – W. Main St. across from Gallatin Mall
Heeb’s East Main Grocery – 544 E. Main St. Safeway - 901 W. Main St.