Our School & Programs

Our school combines academics and the natural world. We seek to connect ourselves, our students, and our community to the environment in which we live. HMI is not simply an environmental, experiential, or traditional school. We borrow liberally from all three traditions, but also leave ourselves open to the world at large. This allows us to present students with new experiences that they can understand and apply to their lives as a whole.

- The **HMI Semester** is an academic and wilderness semester school for motivated college-bound juniors.
- The **HMI Summer Term** is a five-week interdisciplinary program that combines academic enrichment and wilderness expeditions in the Colorado Rockies.
- The **Apprentice Program** is a professional residency for recent college graduates in traditional and outdoor education.
- The **HMI Gap** is a rock climbing and conservation semester for 18-22 year olds that travels throughout the American West and Patagonia.
- **The High Peaks Adventure** is an introduction to the outdoors and outdoor adventure for middle school students.

Mission Statement

The High Mountain Institute engages students with the natural world. Our school boldly unites rigorous intellectual inquiry, experiential learning, wilderness expeditions, and shared responsibility in a strong community. Our students realize their potential—as leaders, independent thinkers, and thoughtful citizens.

Organizational Structure

The High Mountain Institute is a 501(c)(3) educational organization providing opportunities for leadership growth, intellectual maturation, and self-reliance within a traditional academic and wilderness curriculum.

Core Values

The High Mountain Institute promotes excellence in all levels of school life. Classroom, wilderness, and residential life are fully integrated components of the student experience, and faculty members participate as mentors and guides in all aspects of the semester. This interaction promotes close relationships in the community and leads to greater performance and achievement. Students typically leave the High Mountain Institute invigorated academically, intellectually, and socially and are prepared to lead active, achieving, and curious lives.

Five Core Values Govern Teaching & Learning At The High Mountain Institute:

- Mentorship in and out of the classroom
- Transference of what students learn beyond the High Mountain Institute
- Place- and community-based education
- Processed-based learning that teaches students how to think, not what to think, and conveys a passion for learning
- Integration of the natural world, academics, and residential life

Calendar

Each semester is approximately 110 days long. Students spend five weeks in the backcountry of Colorado and Utah, and over twelve weeks on the Leadville campus. In both settings, students participate in a rigorous curriculum. Formally structured contact hours for all courses meet or exceed those of sending schools (60 hours/semester).

Curriculum Overview

The curriculum at the High Mountain Institute includes traditional academic courses in history, literature, mathematics, Spanish language, and science. Students also enroll in a leadership and natural ethics elective. All classes (Algebra II excepted) are taught at the honors or AP-level. Course titles are as follows:

Required Elective
Practices and Principles: Ethics of the Natural World

English
Literature of the Natural World

Science
Natural Science

History
FALL
United States History
Advanced Placement® United States History

SPRING
United States History: Western Perspectives
Advanced Placement® United States History

Foreign Language
Intermediate Spanish
Advanced-Intermediate Spanish
Advanced Spanish

Mathematics
FALL
Algebra II: Algebra and Functions
Precalculus: Trigonometry
Precalculus: Functions
Precalculus: Functions & Trigonometry
Precalculus: Analysis
Advanced Placement® Calculus: AB
Advanced Placement® Calculus: BC

SPRING
Algebra II: Analysis
Precalculus: Trigonometry
Precalculus: Analysis & Limits
Precalculus: Trigonometry & Analysis
Calculus A

Advanced Placement® Calculus: AB
Advanced Placement® Calculus: BC

Students attend classes six days a week, taking a minimum of five courses. Each class meets for 90 minute sessions four times weekly. Math courses, Spanish, and U.S. History keep students abreast of progress in classes at their sending school. Remaining classes are placed-based and teach grade-appropriate skills.

Assessment

Through the semester, faculty expose students to as many innovative means of evaluation as possible while honoring traditional and widely utilized assessment methods. Practical exams, field studies, and class participation complement quizzes, tests, and research papers in a holistic evaluation of students. HMI uses a standards-based assessment model, which is a system of instruction, assessment, and academic reporting that is based on specific standards that are directly related to the learning outcomes of each course. Instead of receiving grades on specific assignments and assessments, students are assessed and receive feedback on specific standards. It is our belief that a focus on standards rather than grades places the emphasis on learning and not on a normative comparison of one student to another. Ultimately, standards-based assessment underscores that learning is a process—one that each student has the ability to direct according to his or her individual efforts. Students are assessed and receive feedback on the specific Skills of Learning. This may take the form of narrative feedback or a score on a 1-4 rubric. While there is discipline-specific language for each level of the rubric, all classes share the following basic rubric scale:

1 = Beginning (55%)
2 = Developing (70%)
3 = Accomplished (85%)
4 = Exemplary (100%)

Each level of the rubric has a descriptive label and is associated with a percentage that may become one part of the final grade calculation.

Accreditation
The High Mountain Institute holds dual accreditations. HMI is fully accredited by the Association of Colorado Independent Schools (ACIS), a member of the National Association of Independent Schools (NAIS) Commission on Accreditation. HMI is also accredited by the Association of Experiential Education (AEE).

Course Descriptions

Practices & Principles

Practices and Principles: Ethics of the Natural World (P&P) is the foundational course of the High Mountain Institute (HMI) semesters. Focusing on both community and individual growth, P&P exemplifies HMI's motto of "where nature and minds meet." The curriculum consists of three parallel progressions: leadership & community studies, environmental ethics, and technical expedition skills.

On campus, students read and discuss articles on the theory of ethics, environmental ethics, and leadership. These discussions provide a foundation for further thought and reflection while out in the field. The course also provides the majority of the curriculum for the wilderness expeditions. In the field, students participate in a variety of classes on leadership, communication, risk management, and technical skills. These discussions complement numerous practical opportunities for students to integrate their learning into life at HMI, both on-campus and during expeditions.

Students are introduced to concepts of philosophical ethics that apply to issues regarding mankind's perception of and dealings with the natural world. The study of both mainstream and alternative philosophical understanding, combined with exploring the world around us allows students to enhance their own personal relationship with the natural world. Utilizing a variety of discussion formats to interpret readings related to Wilderness, nature, environmental ethics, sustainability, animal rights, the value of place, sustainability, etc. students explore what shapes their own personal worldview. In addition to discussions, periodic reflective writing and other assignments (N.B. these vary semester-to-semester) help students think deeply about their relationship with the natural world. They develop resources and skills with which to formulate their own environmental ethic and to articulate and defend these ideas with clarity, consistency and coherence. This exploration culminates in their "Personal Environmental Ethic Presentation" which they deliver to their peers and teachers on the final day of the course.

Technical expedition skills and leadership and community skills are taught primarily in situ during the three expeditions each semester. During the first expedition, students are introduced to the basic field curriculum: they learn the necessary skills to camp and travel comfortably in the backcountry in order to enhance their ability to develop a personal connection to the natural world. These skills include navigation and map reading, self-care in challenging environments, expedition behavior (teamwork, cooking, etc.). During the second and third expeditions, students are challenged to hone and apply these skills. Once they have demonstrated competency in risk management, travel, and communication skills, students may have the opportunity to travel and camp in small groups without direct instructor supervision or to partake in more challenging and technical canyoneering routes with instructors.

Enduring Understandings:
Environmental Ethics
- Every individual has a unique perspective that informs how s/he understands and interprets the world.
- The natural world can be valued in many ways.
- Humans and nature exist in a constant state of interaction, affecting each other in intentional and unintentional ways.

Leadership & Community Studies
- Leadership can take many forms, and effective leadership requires an ability to adapt to context and desired outcomes.
- Leadership and community skills can be taught, practiced, and learned.

Technical Skills

- Backcountry exploration is a means of developing a personal relationship with the natural world
- The simplicity and challenge of traveling safely and living comfortably in the backcountry provides opportunity for reflection and community building.
- The self-reliance necessary for backcountry travel is transferable to "regular" life.

English: Literature of the Natural World

Students in Literature of the Natural World explore the role literature plays in creating and reflecting humankind's changing relationship to the American West and Southwest. Students refine their analytical writing through a close-reading style essay; delving deep into a short passage from Norman Maclean's *A River Runs Through It* and studying Leslie Marmon Silko's non-linear novel, *Ceremony*. They read several short stories about the American West by Annie Proulx, Maile Meloy, and Mary Austin. Students write reflections on the major themes of each piece of work and hone their writing voice in short daily writing exercises. Student-guided discussions encourage students to take ownership over their learning and manage productive discourse without teacher intervention. On expedition in Southeastern Utah, students will read place-based stories that capture the essence of personal journeys to begin reflecting on their own semester experience. They conclude the semester honing their creative writing abilities through a non-linear lyric essay that artfully weaves together three discrete narratives.

Enduring Understandings:

- Humans' diverse relationship with the natural world tend to value: spirituality, consolation, solitude, renewed identity, and unbridled identities offered by the natural world.
- Improving our writing is a continual, relational process in which we review and revise our work. The first draft is not the final draft.
- Student-centered learning encourages the development and clarification of ideas supported with evidence.

Science: Natural Science

The Natural Science course is founded on an ecology- based curriculum that strives to spark and drive investigation into the ecosystems of the Southern Rocky Mountains and the Colorado Plateau. Coursework is intended to develop ecological inquiry, observation and analysis of landscape patterns, striving to promote independent understandings around the connectedness of all ecosystem components. Throughout the semester students will actively build upon and compare classroom theory with field studies to begin formulating their own lens to understand and interpret natural landscape patterns and ecological interactions in any place and environment that they explore. Walking away from the course students should be able to engage and connect to the world through an ecological lens.

Enduring Understandings:

- Everything, biotic and abiotic, interacts in dynamic relationships.
- Scientific findings are more powerful when they can be communicated to varied audiences.
- Scientific observation is an active way to cultivate curiosity of place.
- Engaging with science improves our ability to think critically.

United States History

History is a dynamic and ever-evolving enterprise; this course, therefore, focuses on the contested nature and unresolved questions of the American past. Students consider and challenge prevailing historical interpretations while also creating their own narratives that explain the relationships among historical events and make meaning from the broader trajectory of American history. Chronologically, this course moves from the pre-colonial period through the end of the Civil War and Reconstruction and prepares students to reenter the second half of an American history survey or A.P. United States history. Primary source documents—letters, works of art, political

cartoons, pamphlets, speeches, photographs, advertisements, and poems—provide the foundation for historical inquiry in this class. A variety of secondary source readings by scholars such as Gordon Wood, Edmund S. Morgan, Mary Beth Norton, Ta-Nehisi Coates, Pauline Maier, and others complement these documents and bring students into the ongoing historiographical debates that give life to the discipline. Students examine, in particular, the relationship between history and narrative, the connection between liberty and slavery in the antebellum period, the construction and reification of early-American gender roles, the contested role of equality in the colonial and Revolutionary periods, the tension between individualism and communitarianism, and the evolving meaning of freedom in American political discourse. Students have the opportunity to refine their authorial voice in analytical essays, gain confidence in front of an audience through class presentations, and link the past to the present through student-led discussions.

Enduring Understandings:

- History is a narrative reconstruction of the past, and narratives are inherently subjective. Challenging traditional or predominant narratives and seeking out alternative perspectives is crucial to thinking critically about the past as well as the present.
- The ideals that shaped the founding of the United States continue to exert a profound influence over the social, cultural, and economic life of the nation.
- Rhetorically contentious terms such as "liberty," "freedom," and "equality" have meant fundamentally different things to various actors throughout the history of the United States. Such lofty political ideals have often contradicted the lived reality of a nation founded in conquest and defined by the mixing of diverse cultural groups.

Advanced Placement® United States History

In the Advanced Placement (AP) United States History class, students prepare for the newly revised AP exam in May. The primary course text is America's History (8th Ed.) by Henretta, Hinderaker, Edwards, and Self; however, students also encounter a variety of primary and secondary source material designed to add depth and highlight the interpretive nature of historical inquiry. The fall semester begins with a study of English colonization in North America that focuses on the growing regional divergence of political, social, and economic systems and the ramifications for the future United States. The unit covering the Revolutionary period culminates in a class debate over the historical efficacy of Gordon S. Wood's thesis in his seminal study, The Radicalism of the American Revolution. The class then examines the emergence of America as an independent nation through the development of party politics, Jeffersonian Republicanism, and antebellum culture. While underscoring the political and economic changes that accompanied the rise of nineteenth-century Jacksonian democracy, students also consider the abstract and individualistic ethos of northern Transcendentalism in contrast to the strongly literalist foundations of proslavery thought in the South. The semester concludes by considering sectionalism, the Civil War, and Reconstruction through the evolving political rhetoric of "freedom" and "equality."

Students begin the spring semester with the history of Reconstruction, including a close reading and discussion of Robert Penn Warren's The Legacy of the Civil War.
The late nineteenth and early twentieth-century expansion of industry next provides students an opportunity to consider both the profound possibilities made possible by technology, as well as the ambivalences which marked responses to the American transition to modernity. The class then draws connections between the closing of the western frontier, famously heralded by historian Frederick Jackson Turner, and the increasingly imperialistic tenor of American politics in the late Nineteenth Century. Students analyze similarities and differences between Roosevelt's "big stick" policy, Taft's Dollar Diplomacy, and Wilson's Moral Diplomacy; students also examine the key ideas and limits of Progressivism. The class then moves on to study the connections between World War I, the Roaring Twenties, the Great Depression, and New Deal. Following an examination of World War II, the postwar boom, the Civil Rights Movement, the crises of the 1960s and 1970s, the course culminates with the

national emergence of a new Conservatism and the end of the Cold War.

Class discussion serves throughout the term as a major vehicle for understanding seminal events in American history, links between seemingly disparate developments, and the contemporary relevance of historical issues. Assessments include not only the quality and frequency of student contributions to discussion, but also emphasize close textual analysis and clarity of prose. Throughout the semester, students prepare for the AP exam by completing Document Based Questions (DBQ), regular multiple-choice exams, and analytical essays. The demanding AP schedule requires significant self-motivation and discipline from students, including a considerable reading load to help them prepare for the exam at year's end.

Enduring Understandings:

- History is a foundational narrative; it provides insight into the origins of our nation and our world and helps us better understand ourselves.
- The ideals that shaped the founding of the United States continue to exert a profound influence over the social, cultural, and economic life of the nation.
- Historical analysis is an inherently biased and subjective enterprise. Challenging traditional or predominant narratives and seeking out alternative perspectives is crucial to thinking critically about the past as well as the present.
- The way in which we interpret the past informs how we understand the present and often defines our possibilities for the future.

Spanish

Spanish at HMI focuses on the exploration of grammar topics, vocabulary, and incorporation of the four major linguistic skills—reading, writing, speaking, and listening—in order to advance language proficiency. Spanish is offered at three different levels and students are placed in the level that will best prepare them for success upon return to their sending school. While the specific content that students learn varies considerably, the Spanish department strives to develop in students habits of mind that they can apply across and beyond the Spanish curriculum. During the semester, students will both review familiar verb tenses and grammar topics and explore new vocabulary and tenses. The grammar "nuts and bolts" will support our study of Latino immigration to the United States. This knowledge will be the basis for building skills of thinking and questioning critically, providing feedback, taking responsible risks, finding humor, leading, and communicating with clarity paired with dispositions of persistence, empathy, and social responsibility. Specific tasks such as daily informal conversations, skits, reading discussions, presentations, letter writing, formal discussions and debates and creative writing are assigned to assess the development of students' skills in each of the four major linguistic skills. By the end of the course, students will have honed their skills to further study and explore the Spanish language as well as cultural topics and immigration issues across the globe.

Intermediate Spanish
The Intermediate Spanish course, conducted primarily in Spanish, focuses on the exploration of grammar topics, vocabulary, and incorporation of the four major linguistic skills—reading, writing, speaking, and listening—in order to advance language proficiency. During the semester, we will both review familiar verb tenses and grammar topics and explore new vocabulary and tenses. The grammar "nuts and bolts" will support our study of Latino immigration to the United States. This knowledge will be the basis for building skills of thinking and questioning critically, providing feedback, taking responsible risks, finding humor, leading, and communicating with clarity paired with dispositions of persistence, empathy, and social responsibility. Specific tasks such as daily informal conversations, skits, reading discussions, presentations, letter writing, and creative writing are assigned to assess the development of students' skills in each of the four major linguistic skills. By the end of the course, students will have honed their skills to further study and explore the Spanish language as well as cultural topics and immigration issues across the globe.

Advanced-Intermediate Spanish
The Advanced-Intermediate Spanish course, conducted almost entirely in Spanish, focuses on the exploration of grammar topics, vocabulary, and incorporation of the four major linguistic

skills—reading writing, speaking, and listening—in order to advance language proficiency. During the semester, we will move quickly through a review of familiar verb tenses and grammar topics in order to explore new vocabulary and tenses. The grammar "nuts and bolts" will support our examination of Latino immigration to the United States, the Chicano Movement, and storytelling. These units will be the basis for building skills of thinking and questioning critically, providing feedback, taking responsible risks, finding humor, leading, and communicating with clarity paired with dispositions of persistence, empathy, and social responsibility. Specific tasks such as reading discussions, daily informal conversations, formal discussions and debates, and presentations, letter writing, and creative writing focused on examining Latino immigration to the United States are designed to assess the development of student skills in each of the four major linguistic skills. By the end of the course, students will have honed their skills to further study and explore the Spanish language as well as cultural topics and immigration issues across the globe.

Advanced Spanish
The Advanced Spanish course, conducted entirely in Spanish, focuses on the exploration of grammar topics, vocabulary, and incorporation of the four major linguistic skills—reading writing, speaking, and listening—in order to advance language proficiency. During the semester, we will examine Latino immigration to the United States and the Chicano Movement through various academic and news articles, poetry, prose, films, and podcasts, accompanied by Sandra Cisneros' *La Casa en Mango Street.* We will finish the semester with an in-depth look at the power of storytelling, practicing our own storytelling in Spanish. These units will be the basis for building skills of thinking and questioning critically, providing feedback, taking responsible risks, finding humor, leading, and communicating with clarity paired with dispositions of persistence, empathy, and social responsibility. Specific tasks such as reading discussions, daily informal conversations, formal discussions and debates, and presentations, letter writing, and creative writing focused on examining Latino immigration to the United States are designed to assess the development of student skills in each of the four major linguistic skills. By the end of the course, students will have honed their skills to further study and explore the Spanish language as well as cultural topics and immigration issues across the globe.

Enduring Understandings:

- The building blocks of language—grammar, vocabulary, correct language structures and patterns, phrasing, and pronunciation—are vital to conveying meaning. Mastering these building blocks takes imagination, persistence, and commitment to practice.
- Every individual has a unique perspective that informs their understanding and interpretation of the world around them. Studying a language allows one to better empathize with others perspectives and cultures, explore new disciplines and knowledge from a broader variety of sources, and thoroughly examine one's own culture with a more informed lens.
- Immigration is a complex issue and has a significant effect on the cultural identity of the United States. Seeking out diverse perspectives is crucial to thinking critically about this issue as the immigration experience can be different for all.

Mathematics

Math courses at HMI vary a great deal, between courses and between semesters. We strive to place students in courses that will both set them up for success upon return to their sending schools and create a coherent course of study for the class as a whole. While the specific content that students learn varies considerably, the math department strives to develop in students habits of mind that they can apply across and beyond the math curriculum. These include reasoning abstractly, finding patterns and making generalizations, constructing logical arguments, probing for deeper structure, using technology strategically, attending to precision, and modeling with mathematics. These heuristics are embedded through all of our courses; while the course descriptions below outline specific content that students will work to understand over the course of the semester, these broader habits of mind

support each of our courses and guide our daily pedagogy.

Algebra II: Algebra & Functions (Fall)
This course is for students who have studied a full year of Algebra I and are beginning their study of Algebra II. The focus is on manipulating algebraic expressions and working with a variety of functions. Students in this course will be prepared to reenter an Algebra II course at their home schools.

Algebra II: Algebra & Functions typically begins by studying expressions and equations of a variety of types, with a focus on common misconceptions and the algebraic foundation for a study of functions. Then, the class moves into a study of functions, including properties of functions, linear and quadratic functions, and function transformations. From here, the course varies considerably based on specific student needs. Likely topics include further study of functions, including inverse and composite functions, exponential and logarithmic functions, polynomials, and rational functions. Algebra topics including properties of exponents and logarithms, polynomial operations, and arithmetic with rational expressions are taught in connection with the corresponding functions.

Algebra II: Analysis (Spring)
This course is for students in a second semester of Algebra II. In semesters where this course is offered it is likely to be very small and tailored to suit specific home school courses, as many second-semester Algebra II students will take a course in trigonometry. Students in this course will be prepared for a Precalculus or Algebra III course their senior year.

Algebra II: Analysis typically begins with a survey of topics in functions. Likely topics include function transformations, exponential and logarithmic functions, polynomials, and rational functions, with supplementary topics in algebra as necessary. Then, students move into a study of conic sections, complex numbers, sequences & series, and other topics as dictated by students' home school courses.

Precalculus: Trigonometry (Fall and Spring)
This course focuses exclusively on trigonometry; while the title of the course is Precalculus, it is appropriate for either Algebra II or Precalculus students who spend the entire semester studying trigonometry. Students who study Precalculus topics in functions and analysis in the opposing semester will be prepared for a calculus or other advanced math course their senior year.

Precalculus: Trigonometry begins with a geometric approach to trigonometric ratios and evaluation of trig functions. From there, the course moves into a study of functions, graphing all six trigonometric functions and their inverses, and using this as a platform to deepen students' understanding of trigonometric ratios. Next the course moves into a study of the algebra of trigonometry, focusing on proof using trig identities and solving equations with trigonometric functions. Additional topics vary each semester, but typically include the trigonometry of complex numbers and the law of sines and cosines; other topics may be included based on specific student needs as time allows.

Precalculus: Functions (Fall)
This course surveys a variety of topics in functions, and is appropriate for students whose home school courses begin with an extensive study of functions and their properties, and do not cover trigonometry. It may be appropriate for some advanced Algebra II students on a case by case basis. Students who go on to study topics in trigonometry and analysis in the spring semester will be well prepared for a calculus or other advanced math course their senior year.

Precalculus: Functions typically begins by studying function transformations. Then, students move into a detailed study of the properties of functions, quadratic functions, and function operations. The second part of the semester examines exponential, logarithmic, polynomial, and rational functions, and corresponding algebraic topics to supplement this study. While this course covers a wide range of content, the specific topics and areas of focus vary based on the particular needs of the students in the course.

Precalculus: Functions & Trigonometry (Fall)
This course surveys a wide range of topics in precalculus, with a focus on different representations of functions, including trigonometric functions. It is appropriate for students whose home school courses cover

trigonometry in addition to other topics in the precalculus curriculum. Students who go on to study analysis in the spring semester will be well prepared for a calculus or other advanced math course their senior year.

Precalculus: Functions & Trigonometry begins with a study of trigonometry, with a focus on evaluating and graphing the six trigonometric functions. The, students study the algebra of trigonometry and solving trigonometric equations. Additional topics in trigonometry may be included depending on the specific needs of students in the course. In the second half of the course, students study functions. Typical topics include exponential and logarithmic functions, polynomials, and rational functions, in addition to the corresponding algebraic content to support these topics.

Precalculus: Analysis (Fall)
This course is offered in semesters when there is a wide range of needs in precalculus classes. While the Precalculus: Functions course focuses on different functions, this course typically includes topics such as conic sections, probability, combinatorics, sequences and series, and polar and parametric functions. While the specific topics vary each time the course is taught, the course is appropriate for certain students whose home school precalculus courses do not cover trigonometry. Students who take a complementary precalculus course in the spring semester will be well prepared for a calculus or other advanced math course their senior year.

Precalculus: Analysis typically begins with a study of conic sections. From there, topics often include sequences and series, probability, combinatorics, the Binomial Theorem, and rational functions. The course will end with any of a number of topics, at times including complex numbers, polar and parametric functions, matrices, vectors, mathematical induction, or mathematical modeling.

Precalculus: Analysis & Limits (Spring)
This course surveys a variety of topics in precalculus, with a specific focus on topics that are necessary to move successfully into a calculus class the following semester. It is appropriate for students whose precalculus courses have already covered trigonometry, and integrate significant first-year calculus theory into the course. Depending on their home school courses, students may be prepared to take AB or BC Calculus the following semester.

Precalculus: Analysis & Limits typically begins with a study of conic sections. From there, students move into topics including the Binomial Theorem, sequences and series, and rational functions. The latter part of the course examines the graphing of polar and parametric functions and finding limits of a variety of functions. Some semesters, principles of differential calculus will be introduced as the final unit.

Precalculus: Trigonometry & Analysis (Spring)
This course surveys a variety of topics in precalculus, with a focus on trigonometric functions and topics that are necessary to successfully enter a calculus course the following semester. It is appropriate for students whose home school courses cover precalculus topics, including trigonometry and an emphasis on first-year calculus theory. Depending on their home school courses, students may be prepared to take AB or BC Calculus the following semester.

Precalculus: Trigonometry & Analysis typically begins with an in-depth study of trigonometric functions, including evaluating and graphing the six trigonometric functions. The course then moves into a study of the algebra of trigonometry, including proof with trigonometric identities and solving equations. The topics in the latter half of the course vary depending on the specific students in the course; typically students explore exponential and rational functions. Then, polar and parametric functions, rational functions, sequences and series, and the Binomial Theorem are often included. The course typically ends with a study of limits, and some semesters an introduction to differential calculus.

Calculus A (Spring)
This course is an introduction to differential calculus. It is appropriate as a second or third semester of precalculus for students with the appropriate prerequisites. Students will finish the course prepared for a BC calculus or other calculus course the following year.

Calculus A typically begins with a survey of topics in functions, including exponential, logarithmic, trigonometric, and rational functions, with an

emphasis on calculus theory. Then, students study limits as a way of understanding functions and introducing the derivative. Students learn about the first and second derivative tests, the full range of derivative rules, implicit differentiation, and the theory that undergirds differential calculus. Application problems include position-velocity-acceleration, optimization and related rate problems. The course typically ends with an introduction to antiderivatives and the First Fundamental Theorem of Calculus.

Advanced Placement® Calculus: AB (Fall and Spring)
This course is designed to prepare students for the AP® Calculus AB exam in the spring; the fall semester course is suitable for students who have completed precalculus, while the spring semester course is appropriate for students having studied differential calculus in the fall. The course is typically very small, and covers a traditional AP curriculum, although slight modifications are made each semester to best suit the students in the class.

AP® Calculus AB assumes no prior calculus knowledge; in the fall, the course begins with a study of limits and derivatives, and typically covers all of differential calculus and introduces integral calculus through antidifferentiation and the First Fundamental Theorem of Calculus. In the spring, the course begins with a review of antidifferentiation, and moves into an in depth study of integration and its applications, with significant time set aside for AP exam review.

Advanced Placement® Calculus: BC (Fall and Spring)
This course is designed to prepare students for the AP® Calculus BC exam in the spring; the fall semester course is suitable for students who have completed precalculus while the spring semester course is appropriate for students who have studied differential calculus and significant integral calculus in the fall. The course is typically very small, and covers a traditional AP curriculum, although slight modifications are made each semester to best suit the students in the class.

AP® Calculus BC often begins with limits and derivatives in the fall, but it is important to note that many students enter the course having already studied limits and some differential calculus the previous spring; in some semesters this means that the class is able to start farther ahead; in any case, the course is fast paced and rigorous. In the fall, topics are covered through differential calculus and applications of integration. In the spring, the course typically begins with applications of integration, although this may change at the instructor's discretion depending on the prior experiences of students in the class. The class then finishes a study of advanced integration techniques and examines Taylor polynomials and the calculus of polar and parametric functions before moving into AP exam review.

SUMMER TERM CALENDAR

The Summer Term is 37 days long. Students spend just under three weeks in the backcountry of Colorado and the remaining time is spent on HMI's Leadville campus. In both settings, students participate in a rigorous curriculum. Formally structured contact hours for each course are listed below:

- Practices & Principles: Wilderness & Leadership: 24 hours
- Developing a Sense of Place: 30 hours

CURRICULUM OVERVIEW

The academic program at the Summer Term focuses on developing each individual student's sense of place, leadership skills, and environmental ethic. Our curriculum is interdisciplinary, allowing us to consider topics and ask questions from multiple perspectives. Balancing rigor with fun, the Summer Term is designed for students who are intellectually curious and enthusiastic about learning by doing. Summer Term students take two classes: HMI's keystone course, Practices & Principles, and the core Summer Term class, Developing a Sense of Place: Social & Environmental Science in Colorado's Rocky Mountains.

When on campus, the Developing a Sense of Place course meets for twelve hours a week. A substantial portion of the P&P curriculum is taught during the wilderness expeditions.

COURSE DESCRIPTIONS

Practices & Principles: Wilderness & Leadership

Practices & Principles is the foundational course of all High Mountain Institute programs, including the Summer Term. The curriculum includes wilderness skills and leadership studies. Through outdoor and experiential learning, students learn and practice various leadership skills while learning to comfortably camp and travel in the mountains. Students walk away with a developed sense of self, awareness of their personal leadership style, and the confidence to overcome diverse challenges.

Developing a Sense of Place: Social & Environmental Science in Colorado's Rocky Mountains

Merging environmental science, history, ethics, and literature as our guides, this interdisciplinary course is centered on exploring what it means to have a sense of place. Using Leadville, Colorado as a framework for the study of place, students learn about its rich mining history, conduct ethnographic interviews with local residents, and examine the science and ethics of humans' impact on the natural world. Science labs are experiential in nature and focus on topics such as the geology of the Rocky Mountains, environmental remediation efforts, and the impact of climate change on mountain ecosystems. The course culminates with an independent project where each student reflects on a place that is personally significant to him/her.