**Ecology & Conservation Excursion**

**Torres del Paine, CHILE**

**AAEC Early College High Schools**

**January 2015**

Arizona Agribusiness & Equine Center, Inc. is proud to announce an exciting and challenging new program for its college directed students. For the past 17 years, AAEC has been the leading early college high school district in Arizona. Our students enter universities and colleges throughout the United States better prepared for college success because of the opportunities afforded to them through our program. Our partnership with the Maricopa County Community College District gives AAEC students the opportunity to take concurrent college courses, and over 30% complete associate degrees before graduating from high school. Thus, many of our students enter universities as juniors, and 80% of them earn their bachelor’s degree in two years.

The latest research indicates students become successful professionals faster if they have **international exposure** that enhances their global awareness.

In the past three years AAEC has offered trips to South Africa, where students with the expert assistance of veterinarians have worked on wild animals in their natural habitat. Several students who participated in these trips are now pursuing their dreams and continuing their studies in related professions: Wildlife Conservation, Veterinary Medicine, and Ecology.

Now, we would like to introduce our newest international experience for students at AAEC.

Description of Educational Experiences: (Please note that the classes listed in bold reflect the academic standards used to create the activities)

**The students will spend 4 days in Eco Camp Patagonia in the Torres del Paine National Park in southern Chile. The park has incredible views with awe inspiring spectacular granite peaks.**

**DAY ONE (1)** Students will hike the mountains, acquainting themselves with the importance of geological studies and focusing on the interactions between people and the earth. Students will examine the results of hazards such as floods, earthquakes and landsides as well as fossil fuels, and mining. The students will study the composition of the earth’s crust and the geological processes at work on and within the earth’s surface. **(GLG 110-Environmental Geology, GLG 101- Introduction to Geology, GCU 122-World Geography of Western Hemisphere, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 441/442 Natural Resources 1 & 2, 211/212 Global Studies-Geography 1 & 2)**

**DAY TWO (2)** the students will use their hiking and mountain climbing skills in ascending the Towers in a full day and night trip to experience surviving on a granite mountain for 24 hours. This opportunity will give students hands on experience in survival techniques as they spend time with nature and the environment. **(GCU 141-Introduction to Economic Geography, BIO 149-Ecological & Environmental Study, BIO 105-Environmental Biology, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 441/442 Natural Resources 1 & 2, 211/212 Global Studies-Geography 1 & 2)**

**DAY THREE (3)** Sustainability and the impact of people on natural ecosystems are the focus on the third day, including an interdisciplinary analysis of interactions among living and non-living environmental components. This will include scientific methods of investigation and solving environmental problems using experimental design and presentation. **(ENV 230-Foundations of Environmental Science, GLG 110-Environmental Geology, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish)**

**DAY FOUR (4)** Students will be transported by boat across the Lagoon Azul, a crater lake, to explore glaciation and glacial landforms, the geological structures in crustal rocks, and the three part classification of rock processes. In this activity the students will learn about the historical background of Chile and its prehistoric era, pre-Columbian era land forms, and climates**. (GLG 110-Enviromental Geology, GLG 101-Introduction to Geology, ASM 101-Human Origins and Development of Culture, GCU 223-Geography of Latin America, GCU 122-World Geography of the Western Hemisphere, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 441/442 Natural Resources 1 & 2, 211/212 Global Studies-Geography 1 & 2)**

**The next 4 days will be spent on Chilean “Estancias” (ranches) working with locals (gauchos) learning the cultural and native customs of individuals from Chile.**

**DAY ONE (1)** Students will be taken to different parts of Patagonia to observe several species of animals and birds: Andean condors, Nandu (Darwin’s rhea), Guanacos (relatives of the Llamas), plus other fauna native to Chile. This experience will give our students an introduction to the field of wildlife biology/management, including the related legal, cultural, ecological and population dynamics. Students will have the opportunity to conduct field research, using survey techniques for wildlife populations, including mammals, fish, birds, and reptiles and the related topics of vegetation and habitat. **(BIO 254 Entomology, BIO 140 Wildlife Field Techniques, BIO 274- Introduction to Wildlife Management, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 441/442 Natural Resources 1 & 2, 211/212 Global Studies-Geography 1 & 2)**

**DAY TWO (2)** Students will participate in a full day of activities on an estancia with equine operations. They will learn how Chilean horses are different from American-bred horses through examinations and active work with the horses, including analyzing natural behavior patterns of horses. They will assess vital signs; learn techniques for training endurance horses, and practice methods of restraint, leg wraps, leg sweats and poultice applications. The students will be supervised by veterinarian and other equine professionals. **(EQS 105, Principles of Equine Science, EQS 264 Equine Management, EQS 250 Equine Evaluation, EQS 140 Equine Behavior, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 504/504 Animal Production Systems 1 & 2, 514/515 Equine Science, 512/513 Introduction to Veterinary Science 1 & 2)**

**DAY THREE (3)** this day is dedicated to the environmental conservation movement in the National Park and research of the wild horse population. Students will experience the process that the National Park and the country of Chile are developing to maintain an environmental level of growth using outside support from universities and other countries. These partnerships are aiding Chile in its emergence as the South American leader in ecological and conservation processes. The students will use scientific methods of investigating and solving environmental problems with an emphasis on experimental design and presentation**. (BIO 140-Wildlife Field Techniques, BIO 274-Introduction to Wildlife Management, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 514/515 Equine Science, 526/527 Horse Evaluation 1 & 2, 512-513 Introduction to Veterinary Science 1&2, 551/552 Agribusiness 1&2)**

**DAY FOUR (4)** the final day is one for presentations from professors from the universities in Chile. They are presently excavating a large site of dinosaurs and other paleontological findings in Patagonia. The students will be taken to a site to work with these professionals in the field. **(GLG 110-Environmental Geology, GLG 101-Introduction to Geology, ART 131-Photography 1, ASM 101-Human Origins and Development of Culture, SPA 101-Elementary Spanish, 551/552 Agribusiness 1 & 2)**

*NOTE- Students will journal extensively each day. They will reflect on the day’s activities, what they did, what they learned and topics they wish they could have explored more deeply. Students should also have a camera to document their experiences as well as use these pictures for the college photography classes.*

*Upon returning to Arizona, each student is expected to write a paper that reflects upon their experiences in Chile, and which will form the basis of presentations to fellow students, local service clubs and the community colleges.*