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Making Changes to a Well Known and Respected Equine Sciences Program

J.Heird

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In the Fall of 2005, the Equine Sciences program at Colorado State University initiated some major changes to its curriculum, its program and its industry emphasis. The Equine Sciences program at Colorado State University began in 1985 after a successful research program established the University as an academic leader in the equine industry. The undergraduate degree program was a science based program that incorporated a long-time riding program into its curriculum. At the time (1985) the degree program was the only B.S. degree in Equine Sciences at any Land Grant University. The program grew steadily from 1986 when there were 150 students enrolled until 2004 there were approximately 360 students. The program had an active Intercollegiate Horse Show Association team as well as other academic teams plus a nationally ranked polo program.

Even with its success, the faculty felt that the program was not preparing its graduates to optimally become leaders in the industry. In the summer of 2004, a task force of industry leaders was invited to examine the existing program and compare it to other programs around the country. They were asked to address three questions.

- 1) In comparison to other programs, what is CSU doing correctly?
- 2) In comparison to other programs, what does CSU need to eliminate?
- 3) In order to become the leader in Equine Sciences education, what does CSU need to do differently or add to its program?

The task force made the following recommendations:

To question #1, their answer was that we had great facilities, that we had a vigorous and recognized faculty and that we did a great job of teaching the basic sciences.

Their answer to question #2 was as follows: they recommended dropping the equitation program, the competitive riding team and its related expense in time and support. Their basic question was "why are you giving University credit for riding lessons?" They recommended dropping any duplicate Animal Sciences classes that had corresponding Equine courses (animal nutrition vs. equine nutrition) from the Equine curriculum. They said that if you have an "equine degree" it should be good enough to stand alone.

Their answer to question #3 was as follows: All students should have a supervised internship or international experience. In place of the dropped Animal Sciences courses, the program should add a minor in the College of Business and at the same time, continue offering the double major with Agricultural Business. They recommended adding an equine behavior course, sales management course, sales preparation course, therapeutic riding course, event management course and increase the number of students enrolled in the equine training course. They recommended the establishment of a consignment sale managed by students with horses fitted by students. They recommended the establishment of a permanent advisory committee, international

opportunities and an enhanced development program. During the past 4 years, all of these suggestions have been implemented and the goals have been accomplished. In the past 4 years the average number of students has been 387, and the program has also had the largest freshman class in program history (96 students). In addition, the program has raised over \$2 million in development support, has added 2 new faculty positions and added additional facilities. The faculty of the program are enthusiastic about the changes, excited about the quality of the students and proud of the future direction of the program.

William Woods University Equestrian Studies Division: Who we are, who we aspire to be

Dr. Linda McClaren

William Woods University, Fulton, MO

Horsemanship has been a popular part of the liberal arts education offered at William Woods since the 1920s. In 1972, William Woods established the first four year degree program in Equestrian Science (EQS) in North America. The academic program in EQS at William Woods University focuses on equestrian education to produce graduates that are ready to participate in their niche in equestrian sport as teachers and leaders. At William Woods, the horse is the centerpiece of a liberal arts education that gives learners the opportunity to apply their knowledge of the horse to their choice of complementary subjects such as teaching, training, business, journalism, art, pre-vet, therapeutic horsemanship and legal studies.

The Equine Administration (EQA) major was instituted by the Division of Equestrian Studies at William Woods University in 1992, where it joined an already established and nationally recognized program in Equestrian Science. Recognizing that the equine industry is made up of many diverse aspects, the university decided a major was needed that went beyond the strengths of the EQS major. The EQA program is designed for those students who wish to pursue a career in the equine industry within the areas of business organizations, breed associations, facility or event managers and entrepreneurs.

At WWU, Equestrian Studies students are exposed to a traditional American approach to horsemanship that includes experience with Western, Saddle Seat, Dressage, and Hunt Seat disciplines. There are 150 horses on campus owned by the University. Quarter Horses, Paints, Pintos, Arabians, National Show Horses, American Saddlebreds, Morgans, Friesians, Thoroughbreds, and many different kinds of European and American Warmblood are among the breeds represented in the WWU riding school. A microcosm of the multi-faceted horse industry is represented to WWU students through exposure to the horses, different types of competition, and seven full time faculty members who are active professionals in their individual areas of expertise.

Academic offerings in the equine discipline at WWU provide learners with both theory and practical applications in traditional domains of knowledge such as horse selection and health management, stable, farm and business management, training horses and teaching riding. The goals of study within the equine discipline at WWU include development of knowledge, skills, and attitudes that foster an interest in life-long learning and the ability to teach and/or provide leadership to others. A traditional apprenticeship model of teaching and learning is utilized in many course offerings. At WWU, students shadow and assist professors, team up with other students in problem-solving scenarios, practice teaching and training other students, and participate in internship opportunities with equestrian professionals during breaks in the academic schedule.

An emergent area of academic offerings in the equine discipline at WWU is online coursework. Through online course offerings, WWU aspires to provide equestrian adults

with continuing education. One of the goals of this new type of academic programming is to give working adults the ability to participate in a collaborative environment with a community of their peers towards common objectives such as increased levels of knowledge about teaching riding, training horses, professional ethics, and involvement in respective governing bodies for each branch of equestrian sport.

WWU markets their programs in Equestrian Studies to prospective students and their families by emphasizing both the small size and diversity represented within the WWU community. Although WWU is a small campus community, Equestrian Studies is a big program. With 150 horses and over 275 students in the program, the strength of the program lies in its numbers. The number and diversity of horses, horsemen and horsewomen gathered together at WWU create a collaborative community of learners that are exposed to an unprecedented number of topics and issues related to the horse.

At WWU, learners are encouraged to challenge themselves and pursue their passions. They are shown new ways to see the equine discipline from a variety of perspectives. They are challenged to focus on experiential, professions-oriented learning within a liberal arts context, so they will graduate with a solid foundation and the confidence to take the next step in their lives. They are encouraged to connect with The Woods family- from across the globe; building friendships to last a lifetime.

An Equine Studies Program Without Horses

Judy Downer

Central Florida Community College, Ocala, FL

In 2003, Central Florida Community College enrolled the first students in Equine Studies, under the Business and Technology Division. Ocala is home to a large and diverse equine industry, predominately Thoroughbred but including representatives of every major sector of the equine industry. The local industry lobbied for a science and business-based curriculum to prepare students for the workforce as entry level managerial farm workers. A needs assessment was performed in conjunction with the Economic Development Council. An Advisory Board was established representing a diverse mix of owners, managers, veterinarians and associated business interests from racing, show and recreational sectors of the horse industry. An Associate in Science (2-year, 64 credits) degree in Equine Science, Business Management Specialization is awarded upon completion. Graduates can enter the workforce in farm management, equine retail industry or as an equine service provider. From the beginning, the college's goal was to not maintain resident horses for riding or teaching purposes but to utilize the local community for hands-on training and experiential learning. Every student is required to complete a work/study experience (3 credit) and several courses have extensive field/laboratory exercises (Horse Handling & Safety, Equine Conformation Analysis, Equine Behavior & Psychology).

Since inception, enrollment has grown approximately 20% per year to the current 75 majors. Duplicated headcount in Spring 2009 was 231 students. Because this program is the only two-year equine program in Florida, it attracts not only local students from the tri-county district, but transfer students across the state. Out-of-state and international students have also enrolled and graduated. Additional specializations have been added to capitalize on specific growth sectors in the equine industry. Equine Event Planning is a certificate program (24 credits) catering to the rapid growth in public or private show facilities that need managerial staff to market and plan equine events for optimal profitability. Therapeutic Riding Management is an A.S. specialization under Equine Studies to prepare students for a career as a therapeutic riding instructor (certified by NARHA), a volunteer coordinator or a barn manager in a therapeutic riding center. Recent advances in therapeutic riding have expanded the role that horses play in human therapy from the traditional physical effects in disabled children to autistic children, wounded war veterans and troubled teens. Students spend one course each semester at a local therapeutic riding center developing essential skills for future employment. The newest expansion project is Equine Exercise Physiology, offered for Fall 2009 as an A.S. specialization under Equine Studies. Ocala is home to two state-of-the-art equine rehabilitation centers, the winter home of numerous equine athletes and a major training center for young thoroughbreds. Combining these factors, employment opportunities exist for workers knowledgeable of muscle physiology, conditioning techniques, injury prevention and rehabilitation in the high performance equine athlete. Funding for these curriculum expansions is primarily grant-based. Needs assessments were completed for each new program documenting local support and job potential.

Workforce programs differ from conventional four-year programs in that basic science preparatory courses are not taken. This limits transferability to four-year colleges, but some articulation agreements have been formalized. Another difficulty is the need to

teach basic science (cell biology, biochemistry) within the confines of equine specific courses (Anatomy and Physiology, Equine Nutrition). Nonetheless, academic rigor is maintained through doctorate-level faculty, use of current research for teaching purposes and faculty continuing education. Continued challenges face the program, such as graduation rate, program funding and the lack of a dedicated equine teaching laboratory.

Undergraduate Equine Science at the University of Queensland

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Queensland has the largest horse population of all Australian States with south-east Queensland having the highest horse density in Australia. Approximately 18% of Australia's Thoroughbred horses are in Queensland (third behind New South Wales and Victoria). The equine industry in Queensland is a significant employer: it has invested large amounts of capital and in its various forms, is an important part of the State's social fabric. As such the industry is important to the community. Although harness racing, polo, polocrosse, campdrafting, formal and informal recreational riding and agriculture are important components of the horse industry, it is the Thoroughbred breeding and racing sector that has the highest profile, the largest investment and employs the most people. The Australian thoroughbred breeding industry is the second largest in the world (behind USA) and is pivotal to the viability of the international thoroughbred industry as stallions can stand at stud in one year, both the northern and southern hemisphere stud seasons i.e. stallions are shuttled between hemispheres (September-December, southern and January-April, northern). This has been facilitated by air-transport and changes in Australian quarantine regulations for horses. It is therefore important that the University offer equine courses to undergraduates that prepare them for the range of occupations offered by the equine industry.

Equine science is offered by the School of Animal Studies (Faculty of Natural Resources, Agriculture and Veterinary Sciences) within the Applied Science degree, along with other majors in Production Animal Science, Veterinary Technology and Wildlife Science. In 2004, the School organised industry focus groups for the different animal industries to assist in the realignment of the undergraduate degree program. The new program commenced in 2005 and it was structured in such a way as to give students broad practical equine expertise embedded in science i.e. "Science with Practice". It also had to fit into the other programs within the School and Faculty to allow the students maximum flexibility in moving between specialisations and also in choosing electives. Students completing the B App Sc (Equine Science) are required to complete 24 courses of which only four are core equine. A number of other course selection scenarios could be used by students to increase the equine content of their program by selecting an additional three courses. The equine courses available are outlined below. The first four courses are the compulsory core equine courses that students must successfully complete to include equine science on their degree statement.

Compulsory Core Equine Courses :

Equine Husbandry and Equitation I aims to develop a knowledge of equitation (riding) techniques and husbandry of performance horses at an introductory level.

Equine Stud Management aims to develop a knowledge of the breeding management of horses; involves the handling of stallions, mares and foals during teasing, mating and

foaling times is undertaken. The application of computer technology for the maintenance of breeding and stud farm records and a tour of horse studs are also included.

Equine Nutrition & Health aims to develop a knowledge in applied aspects of horse nutrition with regard to growth and development, performance and breeding including nutritional physiology as it relates to nutritionally related diseases and the preventative strategies involved.

Equine Exercise & Rehabilitation aims to develop knowledge of the physiology and biomechanics of equine exercise including application to the prevention and management of performance problems as well as rehabilitation from injury and disease.

Elective Equine Courses

Equine Husbandry and Equitation II - builds upon Equitation I to the next level (Level 1);

Equestrian Coach Education aims to develop a knowledge of safe and professional instructional skills, both general and sports specific, for equestrian activities to approved *National Accreditation Coaching Scheme at the introductory coaching level*;

Horse Behaviour and Training aims to develop a knowledge of some of the theories and practical principles involved in the handling of horses from birth through to basic training under saddle.

The program has been designed with students taking underpinning science in anatomy, physiology, biochemistry, microbiology, genetics, nutrition, reproduction and health in addition to their equine courses. This knowledge and practical experience involves the welfare, care (husbandry), handling/training and use of horses including breeding and performance (particularly riding) activities. The University of Queensland has excellent facilities for all aspects of student /horse interaction. Importantly, the program is offered in distance mode which provides access for students both nationally and internationally.

In the short time that these innovations have been operating students have been able to combine equine science with production animals and with agribusiness. Moreover, retention rates for the B App Sc Honours program has increased markedly with a number of these students deciding to pursue research higher degrees. In addition, the program is ideally suited for internships for international students.

Use of a Portfolio Project for Authentic Learning

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Introduction

Authentic learning occurs when students are given the opportunity to use “real world” situations and projects to explore, construct, and integrate new knowledge. The use of authentic learning as a pedagogical tool models natural learning and cognition.¹ In this case study, we will examine the use of a portfolio project as a means of fostering authentic learning in a Horse Science course at the University of Connecticut. This concept can be applied to other equine courses.

Materials and Methods

The Horse Science instructor had prior experience redesigning an animal nutrition course that utilized a portfolio project as a means of authentic learning. Scores on the subsequent assessment component showed that students were able to meet the course goals addressed through the portfolio. Based on these data and the positive student feedback regarding the portfolio methodology, the instructor chose to include a portfolio piece as a means of authentic learning for a redesigned Horse Science course. After developing measurable learning goals and objectives, the instructor designed a portfolio project to act as an activity and an instrument for formative and summative assessment. The project was designed to give students the opportunity to apply new concepts and content to authentic cases similar to those they might face in their future careers. The portfolio project included 6 integrated components aligned with the overall course goals and objectives. Four of the six projects focused on applying lecture and reading materials to real world situations. One piece focused on a job shadow or interview designed to give students a context for determining personal goals for their careers. The final piece solicited reflection on their strengths, weaknesses, processes and behaviors for learning and interacting with the material as well as their projection of how they would use their new knowledge in the future.

Results

Students reported that the portfolio project helped them apply new concepts to real life situations. Students also indicated that the project allowed them to meet the stated course goals and objectives. In addition, student responses on the official university evaluation of teaching indicated that students felt the means of assessing the course were appropriate. There was a 78% response rate to the teaching evaluations. For the optional summative evaluation that examined the portfolio project as well as other aspects of the course, the response rate was 31%. In addition to data regarding the effectiveness of the portfolio in meeting objectives, the summative evaluation provided students the opportunity to give feedback on the portfolio piece to the instructor. These data can be used to shape the portfolio project so to benefit the students even more in the future. It is estimated that the faculty member invested 40 hours of time over a period of four months, on these changes.

Discussion

Students seem to benefit from authentic learning because it gives them an opportunity to apply theoretical concepts to authentic situations similar to those they might face in the future. Providing students with real world scenarios that require students to apply their knowledge will help them retain and apply working knowledge of concepts in their future careers. Instructors will also benefit through the improvement of teaching evaluations, improved ability to help students apply knowledge, and increased job satisfaction.

Literature Cited

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Utilizing gait analysis software to enhance student learning in horse evaluation classes

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Introduction:

Many colleges and universities with equine programs offer courses in horse selection and evaluation. Sometimes these classes are prerequisites for competitive horse judging teams, however not all schools that offer horse evaluation classes also fund a competitive horse judging team. While some students enroll in horse evaluation classes with an interest in becoming a member of a future horse judging team, many enroll simply to learn more about horse selection or because they have an interest in veterinary medicine. Currently used methods of teaching horse evaluation classes often involve instructional videos and video-based mock classes for students to practice judging as well as field trips to farms that specialize in certain equestrian disciplines. Large numbers of students in classes as well as declining university budgets make incorporating field trips into class more difficult. Overuse of videos as laboratory activities diminishes the "hands-on" portion of labs as well as leading to student boredom and apathy. There is a need to develop innovative yet practical methods of teaching these classes to maximize student interest and learning potential.

Materials and Methods:

Students enrolled in Light Horse Evaluation (ADSC 3230) at the University of Georgia in spring 2008 completed regular student evaluations following the completion of the course to give suggestions and feedback. This class was taught utilizing primarily lecture and video demonstration of classes and events. Most students favorably rated the course. When asked to compare it with other courses at the University, they rated the course a 1.15 on a scale of 1-5 (1=excellent and 5=poor). However, when asked what could be changed to improve the course, 40% wrote in that they would like labs to be more "hands-on" with less use of video. In 2009, a survey was given to the new ADSC 3230 class prior to the beginning of class to determine experience level and interest. Only 6% of students surveyed had any previous horse judging experience. In this class, a new format was implemented using a gait analysis program in labs to help students learn to evaluate movement and its association with conformation.

Results:

Gait analysis software was purchased from OntrackEquine™ at a cost of \$3000 (with educator discount). The cost of this program was absorbed by class fees in both Light Horse Evaluation as well as horsemanship classes. This particular program allows videos and pictures to be imported into the program where they can be viewed in slow motion as well as analyzed using line and angle measurements. The program was funded in part by use of horsemanship class fees as it is also an exceptional learning tool in these classes to allow students to better understand how their position influences the horse. In the Light Horse Evaluation class, the program was used to help students understand how conformation influences movement and how to evaluate gaits in regards to soundness, quality and desirability for particular disciplines. Students were divided into groups of four and were given two horses to evaluate in regards to both conformation

and movement. Horses varied in breed, height, suited discipline, and soundness. Students took still pictures and videos of their assigned horses, evaluated them utilizing the software program, and presented their findings to the class. By doing this, students were asked to compare the horses' conformation to their movement, analyze each horse for soundness, and analyze the quality and suitability of movement. By presenting their findings to the class, students had to orally justify their statements in a manner of "teaching" the other students. This exercise was repeated later in the semester after discussing hunter and western disciplines.

Discussion:

Although we have only incorporated this software into class for one semester, it has provided a new and innovative way of teaching our horse evaluation class by allowing for more hands-on laboratory experiences as opposed to more video-based learning. Another benefit to using the software is that it has allowed us to utilize horses we already use for other classes. Without the software, it is often difficult for students to discern differences in movement of average horses; often they need to see exceptional movers and poor movers to distinguish differences. By allowing students to slow down the motion of the horse and analyze gaits using measurements and angles, students are better able to distinguish differences between the average moving horses often kept for use in other classes, such as horsemanship. This allows for a convenient way to utilize horses already kept by universities to teach students in horse selection classes in an interactive, hands-on learning environment.

Collegiate Stock Horse Teams

Don Henneke

Tarleton State University, Stephenville, TX

In 1994, initial efforts were made to organize the Stock Horse of Texas Association with the overall concept of “*helping people ride better horses*”. Incorporated in 1998 as a non-profit organization, the official description of the SHOT Program is “*An innovative partnership between Texas horse users, breeders, ranchers, associations, organizations, stock shows, sale companies, and colleges to meet the present and emerging needs of and continuously strengthen the Texas western stock horse industry.*” The involvement of colleges and universities has always been a priority.

In 2006, faculty members from Tarleton State University, Texas A&M University and Texas Tech University formed a Collegiate Stock Horse Division under the umbrella of SHOT. Collegiate competitions were first held within regular sanctioned Shows. Stand alone collegiate competitions were added to reduce costs and improve interaction between competitors. In 2008, eleven Colleges and Universities from six states competed in collegiate sanctioned shows. Several other colleges and universities have expressed interest and will probably compete in 2009.

While each collegiate program differs, many have similar approaches to organizing, supporting and educating team. At Tarleton, the Stock Horse Team is part of the TSU Horseman’s Association. Team members are required to participate in all Horseman’s events as well as all scheduled practice sessions, fund raisers, work days, etc. Each member is required to raise a set amount of donations, and is also assigned to contact potential sponsors. Financial support for all show expenses comes from student efforts. Every student meeting all requirements is eligible to compete and receive assistance in paying show expenses. A stock horse equitation class was first offered in 2007. This course is open to both team members and other interested students. Focusing on the fundamentals of equitation, this class is designed to introduce students to the intricacies of reining, working cow, trail, and pleasure maneuvers.

Students participating in the stock horse team have learned important life skills in addition to improving their horsemanship, training, and competition skills. They have had the opportunity to interact with leaders in the horse industry and have made important contacts for their future. They have learned to make “team” decisions and sacrifice “I” for “we”. The collegiate stock horse team has been extremely beneficial to the Equine Science Program, the Department of Animal Sciences, and Tarleton State University.

Young Horse Research and Teaching Program

Sarah L. Ralston, VMD, PhD, DACVN

Rutgers, the State University of New Jersey

Now in its tenth year, the Young Horse Teaching and Research Program at Rutgers, The State University of New Jersey is unique and valuable equine teaching program. Each summer I take 6 to 10 students to ranches in North Dakota and Manitoba to select 12 draft cross foals for the program. The weanlings are transported in September to Rutgers where students in Research in Animal Science (15-20/semester), Horse Practicum (7-10/semester) and George H. Cook Honors (1 to 3 per year) learn to halter break and train the young horses while also assisting with a wide variety of research projects. In March the horses are turned over to the Animal Fitting and Handling class (24 student handlers, 10-15 students supervisors) for preparation for showing in the Annual Ag Field Day Horse Show. The next day the horses are sold at an auction on campus with all profits returning directly to the program. The goals are to provide students not only the opportunity to learn how to train young horses but also how to design, implement and evaluate research projects and hands on experience with data collection and analysis. We meet for one hour once a week to discuss the research and evaluate research reports and current topics/issues in equine science. The students also learn communication, marketing, fund raising and web design skills plus team work and leadership.

Since its inception, over 500 students have participated in the program, many returning for two or more semesters. About 50% of these had had limited to no previous experience with horses. After participating in the program at least 30 of the novices decided to pursue careers in the equine industry. Over 50 of the students have gone on to careers in veterinary medicine (many pursuing equine tracts?tracks?), with a 90+% acceptance rate of those applying for admission. Others have gone on to graduate programs or have become valued technicians in local equine veterinary practices, farm managers, trainers, extension specialists, feed company representatives and even equine journalists.

The research has resulted in many student Honors theses and research abstracts presented by students at meetings worldwide. We have gained valuable new knowledge about transportation stress, vitamin C supplementation, growth rates and nutrition of draft cross horses, glucose/insulin metabolic responses to a wide variety of feeds and forages and the feasibility of use of total mixed rations in horses.

Ninety-six draft cross yearlings have been sold through the program for an average of \$2195 each. Many of the buyers are repeats or acquaintances of former buyers. The horses have gone on to win ribbons in English Halter, western pleasure, hunters, dressage, driving and competitive trail competitions. At least three have garnered year end awards. Over half, however, are just pleasure horses, used primarily for trail riding and low-level fun shows. All serve as "ambassadors" for the program.

While the program continues to improve and expand, the costs have risen. We started out paying only \$500 for each weanling, traveling only to North Dakota with 4 students in a single rental car, selecting horses over the course of 5-7 days. We are now paying more than double those prices per horse, the trip has expanded to 12-14 days, traveling

to both North Dakota and Virden, Manitoba with an entourage of 10 to 14 people in three rental cars. Other costs include our per diem charges at Rutgers, research, basic supplies, and veterinary care. Total cost of the program is now around \$80,000. Initially funded with internal competitive research grants, the program has been totally self-sustaining since 2002 when we initiated a sponsorship/donor program. Horses and student trips have been sponsored at \$1000 to \$1200 per horse or student, increasing to \$2000 this year. We have a tiered category of donors ranging from Baccalaureate (up to \$100) to Doctorate (over \$10,000 annually). Sponsors receive bimonthly letters from "their" student or horse's student, invitations to 3 separate events involving the horses and recognition on the student run website and auction program. It has received a tremendous amount of positive popular press and support from a wide variety of entities. It is well worth the cost and effort. How much is the effort of the faculty for this endeavor?

The Internship Program at Midway College – a Work in Progress

Janice L. Holland* and Kimberly I. Tumlin

Midway College, Midway, Kentucky

The Past

The Equine Internship program at Midway College was developed so students could receive well-supervised work experience. Students were encouraged to find positions that were similar to the career they desired upon graduation. In the past, this program was a fairly passive process, with little faculty supervision, and minimal assessment of student performance and progress.

The Present

Currently, the Equine Internship program is a 3-credit course, which students can take during any semester (fall, spring, or summer sessions). Most students complete the internship requirement either during their sophomore or junior year, or during the summer between their junior and senior years. A variety of assignments are due throughout the semester, and the faculty member overseeing this course has a much more active role than in previous years.

Students are responsible for locating a job or internship opportunity that will meet the criteria of the course which includes: obtaining a position similar to what the student desires to do after graduation; associating the internship with the equine industry; having duties and responsibilities so that the student can work at least 180 hours. Midway College has the advantage of being in the middle of “Thoroughbred country”, with a wide variety of opportunities available.

Once the student has found a position the work supervisor and student must sign an “Internship Agreement”, and develop at least 5 goals the student will strive to meet. Throughout the semester the student submits a weekly journal, highlighting what is being learned at the internship, and how the process is progressing.

Students are urged to meet with the instructor of the course on a regular basis, especially if problems arise. This is because the student will automatically fail the course if she is fired for just cause from her internship.

As a part of the course, students develop a job description, cover letter and resume. This assignment is the first time the students turn in a structured resume within the equine department. After faculty feedback, a final resume and cover letter are submitted, and an informal interview is conducted internally. Again, constructive advice on how to improve the interview is provided. This part of the course is helpful preparation for the Senior Seminar course.

Students complete an essay in which they are encouraged to further reflect on the internship, including a discussion of goals and their progress in the job. They also critically review the facility and their supervisor. Students are asked to reflect on how they were supervised.

The final assignment is a work evaluation, which is completed by the work supervisor. This evaluation includes questions on attitude, initiative, dependability, and ability to make decisions on the job. Supervisors are also given an area to discuss strengths and weaknesses, and how the student might improve. The final question is whether or not the student would be hired at the facility. Students successful in their internships are often hired full-time post-graduation.

The Future

As with all courses at Midway College, student feedback, faculty experience, and attendance at conferences will bring course changes. Some future aspects of the internship program include: the instructor interviewing the work supervisor before the internship begins; the work supervisor will also be asked to complete a midterm evaluation as well as a final evaluation; and a list of internship sites with recommendations will be developed.

Liability is a current and future concern regarding internships. Is the college negligent if the student gets injured at a facility? Does the college have some responsibility if the student does something wrong at the internship site? To cover some of these questions, a 'code of ethics for the workplace' is being developed. Expectations for the job, for general attitude, and other criteria will be included.

Writing assignments will be further emphasized. Instead of students just listing what they did during the week, they will be asked to reflect back on the experience, and discuss ways they could have improved the situation, and how to apply their experience to future endeavors. These reflections can have major impacts on student's career decisions. An equitation instruction major reflected that while working at a lesson facility over the summer that teaching others to ride was definitely not what she wanted to do for a living. Too often in the equine industry, these decisions are made post-graduation, resulting in a delay of reaching career goals. It is for these reasons that the Equine Internship program provides a solid work experience that is continually progressing towards creating employable graduates.

Internships: a review of 10 years' data in Michigan State University's Horse Management Program

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Internships, or placement training experiences, are the cornerstone of our Horse Management Certificate program (HMC) at Michigan State University. While students in the Animal Science, equine emphasis program have the *option* of completing a horse farm internship, students in the HMC are *required* to do an internship.

Ten years of internship data were assessed and yielded results from 124 placement training experiences, representing 93 different cooperator farms. 70% of students stayed in Michigan for their internships, while 23% went out of state and 6% performed international internships. The following states and countries were represented outside of Michigan: Florida, Texas, Colorado, Kentucky, California, Illinois, Ohio, Arizona, Wisconsin, Pennsylvania, Maryland, South Carolina, Missouri, North Dakota, Minnesota, Northern Ireland, Italy, Nova Scotia – Canada, and Ontario – Canada.

Students are required to perform a minimum of 600 hours of work at their internship farm, which is mutually selected by the student and the internship coordinator (C. Heleski). It is recommended that students complete the internship in a full time manner for a more realistic industry experience; however, in the interest of accommodating non-traditional students, other models have been allowed. 83% of interns completed their placement training experience in a 35+ hr/wk format. As is well established, many horse farms work significantly more than a 40 hr week; 36% of our interns worked 60+ hrs/wk. Hours worked per week showed no significant relationship with student level of satisfaction ($P=0.92$)

Rate of pay on internships varied widely. Some students were considered working students and were not paid at all, but may have received lessons and, perhaps, room and board. Other students were paid considerably more, with the upper range being approximately \$1500/mo + room and board as benefits. 53% of our interns were paid minimum wage per hour or more. 40% of our students were provided with on-farm room and board. Overall, 85% of interns received some form of monetary compensation. Interestingly, rate of pay was not necessarily related to student satisfaction with the internship experience ($P=0.40$). It would appear that opportunities provided to learn was the factor most closely related with student rate of satisfaction with their internship. The most frequently cited reasons for poor internship satisfaction were: learning objectives were not adhered to (i.e. student did almost nothing but clean stalls and perform barn maintenance), supervisor's management style was unpredictable, horses were not treated ethically, and student was not a good fit with the operation chosen. Employers were asked to rate 28 employee characteristics ranging from "maintained work quality under pressure" to "was a motivated learner". One fundamental question was whether students possessed the necessary knowledge and skills to perform their internship. The mean rating for this measure was 3.9 on a 5 point scale, with 5 representing "Exceptional." Employers were asked to give an overall evaluation measure and the mean rating for this was 4.4 on a 5 point scale with 5 once again representing "Exceptional."

Students were asked to rate their supervisor and internship experience on 15 parameters and also provide an overall rating and respond to 6 short answer questions. Students' mean rating for their overall internship satisfaction was 4.1 on a 5 point scale. We will continue to emphasize this highly valuable form of experiential learning in the MSU Horse Management program.

SUNY Cobleskill – Twenty years of Equine Internship Experience

Dr. E. Lynn Dunn

State University of New York at Cobleskill

The College of Agriculture and Technology at Cobleskill is a fully accredited comprehensive two and four year residential college of the State University of New York. The College has offered Bachelor of Technology (BT) degrees in agricultural since 1987. A key component of the degree is the fifteen week or 600 hour internship. The college's equine program, the oldest of its kind in the state, was begun in 1968. For 20 years students earned associate degrees. Two degrees programs, Animal Science and Agricultural Business, offer an equine concentration. They are Animal Science – Equine and Ag Business – Equine Business Management.

Including an extensive internship was a natural with a program that was already hands-on intensive. The internship is seen as a professional experience that enhances graduate qualifications in the workplace, gives the student real world exposure, bridges the theory – practice gap, begins the networking contacts that last a lifetime and gives the student the opportunity to work and learn with top professionals in their field of interest.

Students are required to have a 2.0 GPA and have completed an equivalent of three years of college course work. Prior to the semester or summer of internship the students take ANSC 380 Internship Orientation. This one credit course provides students the opportunity to obtain the skills necessary to obtain a meaningful internship. Students study business etiquette and other work place behaviors, prepare a resume and practice interview skills. Required internship paperwork is reviewed.

Students choose a faculty supervisor from the faculty in their department. This person works with the student to find a suitable internship site, approves the site, communicates with the site supervisor and reviews evaluations from the intern and site supervisor. A grade is submitted when all obligations are met. Internships are graded on a satisfactory or unsatisfactory scale. In most cases an onsite visit is made during the internship. Extra service to faculty for supervision is currently \$450/ intern plus travel expenses to the internship site. Money to support faculty compensation comes from tuition paid by students on summer internships.

Internship sites are expected to provide a learning experience for the intern. Family operations are disallowed and students are dissuaded from interning at a site where they already have experience unless the internship experience can be shown to be a new and unique experience. For this reason very few on campus internships have been allowed. Some sites are repeat sites but over 90% are new locations. Examples of sites give an idea of the diversity of experiences:

- Farms : Pin Oak Stud (KY), Lanes End Farm (KY), High Cliff Farm (NY), McMahon's Thoroughbreds (NY), Gallagher Stud (NY), Ox Kill Shires (NY), Buttonwood Farm(NY)
- Training Facilities: Treeline Farm (NY), FingerLakes Thoroughbred Adoption Center (NY)

- Veterinary Hospitals: Cummings School of Veterinary Medicine at Tufts (MA), Rochester Equine (NH), Equine Clinic at Oakencroft (NY), Cornell University (NY), New Bolton Center (PA)
- Equine Businesses: Tractor Supply, Equine Network, Kentucky Horse Park, Agway
- Nutrition Companies: Cargill Inc., Blue Seal Feeds, Inc.
- Government agencies: NYS Ag and Markets, NYS Assembly, Cornell Cooperative Extension, USDA

While some sites are strictly an internship other sites offer the student continued employment at the conclusion of the internship. Almost all sites give the students important experiences and provide valuable references for future positions.

A majority of sites pay their interns an hourly wage. Some offer stipends or room and board. With the current economy more internships are unpaid. Unpaid internships have often presented a dilemma for both the site and students. In 2008 the university developed an affiliation agreement that provides liability insurance through the State for unpaid student interns. Students pay tuition equivalent to one semester of course work and receive 15 credits for the internship.

Paperwork required for the internship includes the internship agreement, the memorandum of understanding, mid internship and final evaluation forms from intern and site supervisor and a journal. Students also present to a class at the conclusion of their internship.

There have been few changes to the internship program over the last 20 years primarily due to the overwhelming satisfaction from students, supervisors and faculty. The College now offers internships in other departments across campus. The successes of the Agricultural internships have served as a model for the other departments.

Senior Capstone Experiences of an Equine Business Curriculum

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Within the Animal and Veterinary Sciences Department at Clemson University there are three concentration areas of study: pre-veterinary and science, animal agribusiness, and equine business. The equine business students are required to take standard science courses including anatomy/physiology, nutrition courses, reproduction, animal behavior, animal health and a variety of hands-on animal technique courses, which are management based. Additionally, students in the equine business concentration take equine evaluation and horsemanship classes. In their senior year, students are required to culminate their degree with three capstone courses utilizing their previously learned science and business skills. These four-credit courses include Equine Exercise Physiology, Advanced Equine Management and Animal Agribusiness Development. These courses fulfill the capstone experience prior to entering the workforce or in preparation for an advanced degree.

Equine Exercise Physiology focuses on equine nutrition, bioenergetics, physiological biochemistry, and explores the adaptations to body systems in response to exercise and training. This course is a combination of lecture and laboratory. The lectures examine responses of the respiratory, cardiovascular, muscular, and skeletal systems to both an acute exercise bout as well as the modifications to physiology as a result of both disuse and training. Students also learn to compare the exercise response of horses to humans and dogs. In the laboratory, students have the opportunity to apply their knowledge and collect data from horses after an acute exercise bout. Labs emphasize data collection of vital signs and blood parameters pre- and post-exercise and during recovery phases for both fit and unfit horses. Students interpret data to synthesize concepts studied in lecture. Other labs include examination of equine anatomy such as heart, lungs and stomach to provide visual reinforcement of basic anatomy and physiology lectures. Dissection of equine limbs is another laboratory that reinforces both normal physiology and pathologies such as heat damaged tendons and osteoarthritis are common anomalies found in cadaver legs. In partial fulfillment of the course, students are required to prepare an in-depth management and training schedule for a young horse for their discipline of choice. Students must use current scientific research to support their management and training techniques and present their proposals to the class for open discussion and questioning.

Advanced Equine Management is an in-depth exploration into current management topics. The most current data is used to support in-class discussion and lectures on topics such as facility design, parasites and deworming, diseases and disease prevention, colic and horse health, nutrition, lameness, reproduction, and professional development and career opportunities. This course also has a laboratory component which is used to support lecture material. A large portion of this course is dedicated to reproduction, including endocrinology, assisted reproductive techniques and foaling. Students have the opportunity to assist with foaling and provide post partum care for the mare and foal. Students also collect and analyze semen, tease mares for estrus detection, perform artificial insemination and assist with ultrasound and embryo collection procedures. Additional labs include touring area facilities, body condition scoring and hoof care and maintenance.

Animal Agribusiness Development synthesizes the student's animal management and core science courses with accounting, finance and business concepts. The main project for this course is to develop a novel business idea and write a business plan specific to the animal industry. Lectures are dedicated to basic business concepts including business structure and organization, start up legalities and licensing, market analysis, operations management, personnel management, accounting, financial forecasting, and marketing. Lectures are also used to teach general life skills such as purchasing/leasing of real estate, understanding your credit score, obtaining loans/mortgages, health insurance, and entrepreneurial leadership. The laboratory is used to assist students with the writing of the business plan. Students complete peer reviews of other students' plans and provide constructive feedback. Guest speakers from lending institutions, agricultural economists, sales representatives and event coordinators supplement the lecture portion of the course. If time is allowed based on enrollment, students present their business plan to classmates and a panel of business professionals. The main objective of this course is to provide students with a concise and well-documented business plan that can be used to solicit investors and assist in loan acquisition to start their own small business.

These courses ultimately integrate the undergraduate curriculum with real world application. The objectives of these courses are met through projects and hands-on laboratories that assess acquired knowledge and preparation for employment.

Equine Experiential Learning Capstone Course

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Purdue University Calumet

Dr. Colleen Brady
Purdue University

Most equine studies programs have a course or courses in their final year that encompass the skills learned throughout the program. This abstract discusses a capstone course in an Equine Management program taught inside an accredited school of management and on a campus where there is an experiential learning graduation requirement. The campus adopted the experiential learning requirement to ensure that students understand the career they have chosen. Every student must take two courses that include experiential learning. In this program, the capstone course is the Equine Senior Project course that requires students to work with an actual equine business and satisfies one of the experiential learning requirements.

Students completing the program receive a BA in Business with a major in Equine Management. The equine courses in the program are Introduction to Equine Management, Software for equine operations, Global Perspective of the Equine Industry, Equine Internship, Equine Taxation, Equine Ethical Issues, Equine Legal Issues, and the Equine Senior Project. In addition, the degree requires the traditional business courses in accounting, marketing, finance and human relations.

The Equine Senior Project capstone course requires the students to draw on their business and equine course work to create a business plan for an equine business. Students are placed with an equine business that has requested assistance and work with them throughout the semester to create a valid and complete business plan. The progress is carefully monitored by a supervising faculty member. The student will produce a working business plan document for an equine business to determine their requirements, plans for the future, projected income and available resources. The specific outcome of this project is a comprehensive business plan. The specific goals and application may vary by the type of equine business but the skills and process of creating the plan require students to integrate their experience in both the equine and business courses.

The capstone course provides a service and linkage to the equine industry. Students receive valuable experience developing the document and working with an equine business. The business in return has a valuable business analysis and plan to assist them in developing a profitable business. At the end of the semester, the business plan will be evaluated by management faculty and representatives of the business for viability and appropriateness for that particular equine business. The student is assessed on the quality, appropriateness of the document to the objectives of the business, and how well they have applied what they learned in their coursework.

Many equine businesses do not have a business plan and this capstone course will provide an opportunity to improve the outlook for equine businesses and train qualified

business professionals for the equine industry. Students who complete the capstone course will be prepared to be an asset to any equine organization and will have a better understanding of what it takes to be successful in the equine business world.

Consultation Reports and Facility Projects: Capstone Experiences Within Equine Courses

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While the University of Georgia does not have formal capstone courses in the animal science department, several equine courses do provide capstone experiences. One such class is Horse Nutrition and Exercise Physiology, in which half the course is dedicated to nutrition, and the other half to exercise physiology. Another course is Horse Production and Management. Major learning outcomes for both courses are a solid grasp and application of the material and critical thinking skills, among others. The outcomes are assessed by projects such as a nutrition consultation and design of a facility/production program with accompanying papers.

At the end of the nutrition section of Horse Nutrition and Exercise Physiology (ADSC 4390), students conduct a formal equine nutrition consultation and then prepare a paper presenting their findings. They must have a form to fill out, and come prepared to talk to the “owner” of the horse. The barn manager and course instructor serve as the “owners”, and do not provide additional information that the students do not ask for. After all information is collected the students weigh horses, weigh feed/hay, get a body condition score, and collect feed, hay and pasture samples, which are then sent to be analyzed. When the results are returned, the students are responsible for interpreting them and including them in their report. In the reports the students must include the feed analyses, whether or not the diet is appropriate, and provide specifics for alterations. They are also asked to provide information for a future exercise change – horsemanship horses progress from beginning to intermediate courses, and the long yearlings enter a training class when they turn two.

The second part of this particular class deals with exercise physiology. At the beginning of the fall semester, the students collect blood samples from the horsemanship horses after a standard exercise test, and then use various instruments to measure variables such as hematocrit, hemoglobin, lactate, and electrolytes. They also place a heart rate monitor on the horses. Towards the middle to end of the semester the students repeat the testing, and then write a paper detailing their findings. They must describe the variables they have used to assess fitness, and then more importantly, use the variables to determine the effectiveness of the fitness program the horses were entered into (i.e. a horsemanship class following a summer off) and outline changes to ensure the horse continues to maintain or achieve fitness.

A second course that contains a capstone experience is Horse Production and Management (ADSC 3630&3630L). During the second week of the class students are given instructions for a facility project, which is due at the end of the semester. They are

allowed to design any type of facility they would like to have in the future, including training, boarding, “backyard”, therapeutic or veterinary facilities. Students must find a piece of land for sale in the part of the world they realistically would like to have a facility, and provide a print-out of the property description and topographical layout. Students must price out shelter for the horses, be it a barn or run-in shed, and provide a layout of the shelter, with dimensions. The cost of fencing, as well as a description of the type of fence and reasons for the particular fence must also be included in the final report. Details for nutrition, health, and manure disposal programs are required, with their associated costs. Information for all of the required items is provided throughout the course of the semester, either in lecture or in lab. Students are free to report the required information in any form, and most either turn in a notebook or powerpoint presentations. Several students have constructed models to provide facility layout and topographical information.

These real-life experiences require the students to apply their knowledge, rather than regurgitate it on a test. The students seem to really enjoy the experiences. While end-of-the-year evaluations do not specifically ask about the projects, the students often mention them by name, stating that they are very beneficial and actually fun to complete. At least two students have decided on a career in equine nutrition after the consultation experience, and both have said that they would not have considered it until the project. Most students, after complaining about the facility project during the semester, state that it helped them realize the cost of their “dreams”, and that it was a real eye-opening experience. They enjoy thinking through everything, including designing nutrition and health programs.

Overcoming the Catch-22 of Equine Science Curricula: Acquiring Management Experience While in College in Order to Target Management-Level Positions Upon Graduation.

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Most Equine Science students enter their collegiate career with no farm management experience beyond caring for their own horse(s). Yet these students' goals for employment upon graduation generally target management-level positions in the horse industry. Potential horse industry employers rightfully require demonstration of farm management experience as a qualification for management-level positions. Comprehensive management experience that prepares a student for the horse industry should include physical skills in animal handling as well as practical farm management practice. Perhaps the biggest experiential challenge, and the one often overlooked by aspiring horse farm managers, is the acquisition of human (personnel and clients) management skills. In addition, organizational and business management knowledge specific to the horse industry are essential for success in an ever more competitive industry.

Although the entire curriculum in Equine Science at SIUC is geared toward acquisition of these skills and experience, nowhere is it more evident than in the capstone course in our Equine Science curriculum – Stable Management. The Stable Management class has tightly limited enrollment and is open only to Equine Science upperclassmen. Completion of numerous prerequisites insure exposure to, and build the student's skills in each of the major areas emphasized in the Stable Management class: Animal handling and practical horse management, horse farm and personnel management, and horse farm business management.

Animal skills are emphasized through each student's responsibility for their own subset of the SIUC horse herd, assigned according to each student's talents and abilities. Each student is expected to administer basic care and training to each of their "herd horses". This includes, but is not limited to weekly vital signs and monthly weights, vaccinations and Coggins testing, deworming, hoof care, health, first aid and other supportive care, ground training, teasing, breeding and foaling, etc.

Mastery of eight general categories of animal handling skills is required. These include Background skills (knots, equipment, tack), Training basics (leading, longeing, driving), Basic Care and Treatments (dental care, shots and blood collection, fecal testing, blood counts, oral and other medications), Emergency Care (vital signs, wound care and wrapping, suturing), Hoof Care (evaluating balance, trimming), Mare Breeding (teasing, live cover and AI, caslick removal), Stallion Breeding (handling for collection, semen collection and evaluation, hygiene), Foaling and Foal Care (foaling, imprinting, halter training). Specific techniques and skills within each category are demonstrated and

practiced under supervision and independently. Skill mastery is tested by individual practical examination wherein one skill is chosen at random from each category and the student must demonstrate physical and intellectual mastery of that skill to a panel consisting of the instructor and peers. Grading consists of a compilation of peer and instructor's scores for all eight general skill categories.

Farm and personnel management are practiced through each Stable Management students' required supervision of other Equine Science students during required routine animal care activities. Experienced farm management staff oversee these sessions in order to guide Stable Management students with interpersonal relations, problem resolution and organizational techniques. Stable Management students also assume a lead role in foaling university mares as well as breeding. They supervise other Equine Science students who assist with these activities.

Business management skills are honed through the conduct of a semester-long farm management project in which students are required to plan, develop and manage all aspects of a hypothetical working farm. Teamwork, delegation and organizational skills are essential to the completion of this project. The class chooses a breed and discipline for their farm. Each farm starts with the same amount of property and assets. Students can customize their business operation within the defined parameters. Each student must create and manage horses associated with their farm, must manage the personnel, accomplish basic animal husbandry and provide the specified services, and must document and balance expenses and income with the goal of creating a viable business. Required portions of this project include the development of farm blueprints, animal and equipment inventories, listing of services and their costs, construction of a comprehensive farm business plan, business summaries and a comprehensive financial summary.

Students in the Stable Management class are deliberately put under significant pressure through the high demands of this course. Those pressures are physical, emotional and intellectual. Emphasis is put on the fact that the careers that these students seek will demand even more of them than what is demanded in Stable Management. However, completion of Stable Management and their subsequent horse industry internship will provide them with the skills to enter the horse industry at the managerial level to which they aspire.

My Horse University: Online Educational Experiences for Higher Education, Adult Learners and Youth

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My Horse University

My Horse University (MHU) was established in 2005 at Michigan State University (MSU). MHU brings research and knowledge from world-renowned experts to online courses and products. MHU launched its first online course in 2006. Since then, it has provided nearly 1,000 courses to learners from high school and college students to adult horse enthusiasts.

MHU was created through a partnership between MSU Extension, the MSU Department of Animal Science, and MSU Global. The internal roots have branched to include the best of MSU's equine researchers and practitioners to national experts through a partnership with national eXtension, an educational partnership of more than 70 Land Grant Universities. eXtension HorseQuest has a formal partnership with My Horse University (MHU) to share curriculum resources and promote equine science education.

Informal Equine Education

MHU has developed a model for reaching horse enthusiasts of all ages and experience levels through emerging technologies. This program offers participants a variety of learning experiences including self-paced courses, DVDs, and webcasts. The courses offered through MHU are written by national experts in a specific subject area and include text, photos, graphics, videos, webcasts and animations. Each course includes activities to reinforce the learning and an assessment at the end of each unit. All of the courses go through a rigorous three-step review process to ensure that both course content and learner accessibility is of high quality. Lead instructors work with a course designer and potentially a course writer to develop content that best serves the learner in a student led learning environment. The courses are initially peer reviewed by an external expert in the field. The content is then beta reviewed by a group of individuals from academia who are familiar with the topic and finally pilot reviewed by a sample of the target audience. Part of the challenge in a self paced learning environment is for the instructor to predict what questions might be asked during any given point of the course. These questions are answered in the side bar of each course page using definitions, helpful hints and additional content links. Of the current courses offered, over 95% of the participants have given the courses a rating of Good to Excellent and over 85% would recommend the courses to others.

MHU along with experts from eXtension HorseQuest offer free monthly webcasts and e-newsletters (e-Tips) from September through May to reach out to the equine industry and create a learning community. The webcast topics include areas such as farm management, horse health, nutrition and environmental issues. All of the webcasts are recorded and made freely available on the MHU web site for viewing after the live event. In addition, the archived webcasts are used within the online courses to add depth to the learning experience. Since January of 2007, MHU and eXtension have offered 17 free

webcasts with approximately 600 people in attendance. Over 1,400 individuals have accessed the archived webcasts.

Formal Equine Learning

In 2007, a version of the MHU Horse Behavior and Welfare course was offered for college credit to Penn State University students. The non-credit version of the behavior course was used as the foundation for the online lectures. Assignments, discussion forums and additional activities were added to meet the requirements of a college credit course. While the course was led by an instructor from Michigan State University, a weekly laboratory was also offered at Penn State University. Ninety percent of the students from Penn State University gave the course an overall rating of Good or Very Good. This course is now being offered at Michigan State University in the summer as a strictly online credit course. This experience has started a new model for more rapid development of horse related online credit courses within Michigan State University.

Opportunities and Challenges

Opportunities for online learning using the MHU course model in a college equine program include offering subject matter that otherwise would not be taught due to lack of instructor time or expertise; allowing students access to subject matter experts outside of their institution; developing high quality peer reviewed curriculum that can easily be updated; and allowing students more flexibility in their schedule than a traditional face-to-face lecture schedule. However, along with opportunities come some unique challenges including ensuring students are given critical hands-on learning opportunities; establishing a community setting within an online course; providing learning assessments that are suitable to online learning; and developing the political and economic structure to offer online learning opportunities to students across universities.

Midway College Equine Studies –Evolution of a Program

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The Past

Midway College's equine program has been in existence for more than 20 years, and initially was one of very few such programs. Currently, there are a large number of colleges in Kentucky that are offering equine programs. Where Midway once had few competitors for potential students, there are now several options for students. In recent years, enrollment has remained a consistent number (around 160), but the potential for this number to decline is always present.

One of the advantages that Midway has over some colleges and universities is offering a relatively small, liberal arts institution with a student-centered atmosphere. Changes that are made to the curriculum, if not too excessive, only need to be approved by the College's Faculty Curriculum Committee (FCC), a collection of faculty and administrators from the various departments. If changes are extensive, the Board of Trustees reviews proposals. This process facilitates development of innovative programs over the years, including concentrations in "equine assisted learning", and "equine therapy".

The Present

The current full-time faculty, consisting of two equine/animal science faculty and one psychology faculty, has been at the College for five years. Initially, the curriculum consisted of nine separate four-year degrees before the existing faculty completed an extensive "curriculum mapping". As part of the mapping process, input was derived from full time faculty, part time faculty, and staff. The resultant curriculum was streamlined to include four majors in the four-year degree format.

One of the best arrangements to come from this curricular change was the development of a clearly defined core curricula for each type of baccalaureate, either BS or BA, so that students could easily see how the majors worked together. This change aided in advising, registration and academic planning for double majors. This new design also made it easier for the admissions office to recruit students for our programs, and served as a valuable marketing tool for the program.

Another document that was developed after this curriculum mapping session was a list of potential career tracks for each of the majors. This list includes positions with direct horse contact, indirect horse contact, and a combination of the two. Although not comprehensive, it includes some common jobs and some nontraditional jobs for student consideration. In addition, students are introduced to the degrees, and possible job opportunities, in the first equine course they take at the college their freshman year.

Common Pitfalls

One of the biggest challenges in making dramatic curricular changes is the use of multiple catalogs for academic advising. Students entering the College are allowed to stay in the catalog which was in place when they started, so at one point four different catalogs existed, all of which were valid. Students were encouraged to “upgrade” to the most recent catalog, whenever possible.

It became apparent that communication with the admissions office regarding curricular changes was important to program successes. In the past when this was not done it was common to have students mention that they were misinformed by the admissions counselors; however, the situation was clearly a miscommunication. In order to prevent this problem in the future, the department also makes sure that at least one faculty member meets with potential equine studies students.

The Future

The College is now at a crossroads and in discussion on how to further refine the curriculum. An Equine Studies Advisory Board was developed to review future curricular changes. This board includes several members of the local equine community. The program is also considering programmatic changes as a result of discussion with some state licensing boards regarding semantics in degree titles. In addition, a Student Advisory Board was developed to provide focus group discussions on current topics. Program success as a result of curricular refinement to address previous pitfalls, recommendations from the students and community advisory boards is yet to be identified; however, in order to remain a progressive program, the college continues to support proposals for curricular changes at both the programmatic and course levels.

Therapeutic Horsemanship Minor at North Dakota State University

Erika L. Berg

North Dakota State University

Trends in college entrance data reveal the changing demographics of students entering the field of animal science. There are a greater number of students coming from urban areas with no agricultural experience and fewer students coming from rural areas with an agricultural background (Marshall et al., 1998). Additionally, the primary species of interest of incoming Animal Science freshman are not traditional livestock species (cattle, swine, or sheep) but rather horses and companion animals (Marshall et al., 1998; Reiling et al., 2003; McNamara, 2009). It has been suggested that one way to attract students from non-agricultural backgrounds into the Animal Sciences is to incorporate equine and companion animals into the Animal Science curriculum (McNamara, 2009).

The Department of Animal Sciences at North Dakota State University offers both a major and minor in Equine Studies. Interest in the Equine Studies major at NDSU has more than doubled since its inception, increasing from 27 declared majors in 2003 to over 60 in 2008. Paralleling this growth is greater student interest in the area of therapeutic horsemanship. Three core classes in therapeutic horsemanship have been developed in the Animal Science Department at NDSU as part of an interdisciplinary minor curriculum designed to prepare students for successful completion of the therapeutic riding instructor certification exam through NARHA (an equine assisted activities and therapies organization founded in 1969 as the North American Riding for the Handicapped Association).

In the fall of 2007, an introductory course in Therapeutic Horsemanship was offered as a trial course and 12 students from Equine Studies, Veterinary Technology, and Animal and Range Sciences were enrolled. The same course was taught as ANSC 210 – *Introduction to Therapeutic Horsemanship* in the fall semester of 2008 and 19 students enrolled in this course. Majors of the students enrolled during the fall of 2008 included Equine Studies, Animal Sciences, Veterinary Technology, Nursing, Microbiology, Business Administration, Crop and Weed Sciences, and Music, reflecting the diversity of individuals with an interest in this area. In the spring of 2008, the second in a series of three courses was taught to two Animal Science students as a trial course. The same course was offered as ANSC 310 – *Principles of Therapeutic Horsemanship Instruction* in spring semester 2009, and ten students from Animal Science, Veterinary Technology, Nursing, Equine Studies, and Journalism are currently enrolled. The third course in the series, ANSC 410 – *Therapeutic Horsemanship Teaching Practicum*, has yet to be taught and will be offered for the first time in the summer of 2009.

In order to provide students with a real-world experiential learning opportunity, NDSU has partnered with a local therapeutic horsemanship program of exceptional quality in the rural town of neighboring Felton, Minnesota. Riding on Angels' Wings (ROAW) Therapeutic Horseback Riding Program is a NARHA member center and program serving individuals with disabilities in rural communities as well as the Fargo-Moorhead area. The partnership between ROAW and NDSU allows students to actively participate in a working, community program and enables them to witness the benefits of therapeutic horsemanship firsthand. In ANSC 210, students must complete 12 hours of service learning volunteering with ROAW and journal their experiences. In ANSC 310, the course lab time coincides with ROAW lesson times so undergraduates again have the opportunity to be engaged in the program. Students in ANSC 310 have greater responsibilities which will include assisting with mounting and dismounting of riders, leading exercises during the lesson, or teaching a riding skill. In ANSC 410 undergraduates are responsible for the entire lesson which includes writing rider goals and objectives, lesson planning, assigning horses to riders, teaching, evaluating riders, and managing volunteers.

Success of the program will be measured by the following: 1) administration of a pre- and post-program survey on perceptions about people with disabilities; 2) course assessment data will be collected and evaluated at the conclusion of each semester for ANSC 210, ANSC 310, and ANSC 410; 3) data on the majors and minors declared by students will be collected and evaluated at the beginning and end of ANSC 210, 310, and 410 to document changes throughout the program; 4) interviews will be conducted with all graduates and their employers three months post-graduation to assess how well the program prepared students for a job; and 5) documentation of the number of graduates who take and pass the NARHA Registered Instructor Exam will be collected as an indicator of how well the program prepared students for the exam. Data gathered thus far includes post-course surveys and evaluations of ANSC 210 for 2007 and 2008. Those results are summarized in the tables below.

Post-course survey questions for ANSC 210 students	2007 (n=11)		2008 (n=19)		Total (n=30)	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
1) Do you feel you would be able to explain the general benefits of equine assisted activities and therapies?	100	0	100	0	100	0
2) Do you feel you have a greater appreciation for the daily challenges people with disabilities may face?	100	0	100	0	100	0
3) Do you feel you would be more likely to interact with someone who has a disability?	100	0	100	0	100	0
4) Do you feel that how you look at life has changed?	91	9	95	5	93	7
5) Would you consider a career in the field of equine assisted activities and therapies?	82	18	79	21	80	20

Select course evaluation questions for ANSC 210 students	2007 (n=10) (out of 5)	2008 (n=19) (out of 5)
1) The quality of this course.	4.6	4.8
2) Your understanding of the course content.	4.4	4.6
3) I would recommend this course overall.	4.6	4.8
4) Your satisfaction with the instruction in this course.	4.6	4.8
5) The instructor asked questions that stimulated thinking.	4.7	4.8
6) The instructor motivated students to achieve a better understanding.	4.6	4.9

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Equine Science Program at Tarleton State University

Katherine Thomson, D.V.M., Ph.D.

Tarleton State University

Tarleton State University has a very active and diverse Equine Science program that I have been privileged to be a part of both as an undergraduate student and as an Assistant Professor. We do not currently offer a degree in equine science; instead we offer degrees in animal science, animal production, or animal industry with an equine emphasis as an option in any of those degrees. Courses that we offer in the equine sciences include Introduction to Horse Production, Basic Horsemanship, Horse Psychology and Training, Principles of Farrier Science, Equine Behavior Modification, Equine Evaluation, Principles of Equine Reproduction, Horse Nutrition, Equine Exercise Physiology and Conditioning, Equine Assisted Therapy, Advanced Equine Assisted Therapy, Horse Enterprise Management, Internship, and Special Topics. The horses and facility are also used extensively in teaching a class in Animal Diseases and Parasites and are also used for research purposes. Each of the classes listed above has a lab element to the class. We have three faculty members who teach these various classes and also have teaching assistance from 1-3 graduate students in some of the labs. Our facilities include pastures, paddocks, pens, stalls, a 4-stall stallion barn, a breeding barn with attached classroom, and an indoor arena. The indoor arena is utilized by the intercollegiate stock horse show team, rodeo team, judging contest, horse shows, and the general public when it is not needed for equine science classes. We typically have a horse herd of around 75 head that includes therapeutic riding horses, stallions, mares, foals or weanlings, yearlings and 2-year-old horses.

Because of the wide variety of courses that we offer, students can pick and choose equine classes that best fit their interest, be it breeding, training, management, or therapeutic riding. A large portion of our equine emphasis students take a wide variety of equine classes.

We also have a significant number of students who only take one or two equine science classes. Most of these students are in the animal science department and/or in the College of Agriculture. Other students come from across various majors at Tarleton State University, including several from the nursing program whose primary interest is in learning to use the horse as a means of physical therapy to assist handicapped individuals.

The majority of our equine science students come from the surrounding general area of Texas, both from rural areas and from the Dallas/Fort Worth metroplex. We also have students that come from across the entire state of Texas and from other states across America.

One of the recruitment methods that we have at Tarleton are the livestock and horse judging contests that Tarleton State University hosts every spring. These contests attract high school agriculture students from across the state of Texas and many of these students will decide to apply to Tarleton because of their experiences at these judging

contest. We have several recruiters that work for Tarleton including one specifically in the College of Agriculture who attends the major livestock shows to actively recruit students. Tarleton hosts a Texan Tour once each semester where prospective students and their parents are invited to spend a Saturday at Tarleton getting to know the campus, our various programs, and many of our professors. Students who come to Tarleton at other times are greeted cordially and whenever possible are given a campus tour by a recruiter and/or a current student. Typically a professor will visit with the prospective student, especially if we know that they are coming ahead of time and can arrange for a time to visit with them around our teaching schedules. We have a great student body, especially in the College of Agriculture and Human Sciences, and most prospective students who come to our campus to visit are able to appreciate this during their visit. Our equine science classes are very attractive to students interested in horses because we do have a good facility, a fair sized herd of horses, and a lot of hands-on opportunity in most of our classes.

We would like to be able to add a dorm at the Tarleton State University farm so that a select number of students could live at the facility and become even more involved in the day-to-day management of the horse herd and be close enough to be called out at any time to gain more experience in some of those horse activities that are not easily scheduled – like colic treatments, foalings, and injury treatments.

Wild Horse Trip

Patricia Evans

Utah State University

On a trip into the Utah desert students live with a wild horse herd. But this experience is much more than just learning about equine behavior. Utah State University (USU) offers a four day long course in Wild Horse Behavior. This course was developed to offer USU students the opportunity to view undomesticated horses in their natural state. Students camp out in the desert and monitor a herd of up to 200 wild horses, while applying information learned from experts, and witnessing first-hand equine behaviors most have only read about. Students come away from this experience with an interest in current issues facing the wild horse population, and an understanding of herd interaction and dynamics that cannot be gleaned from a book.

Students learn about the horses' daily movement, grazing and watering patterns. The monitored herd is unusual in that multiple bands live together so the herd consists of 20 or more bands. During this trip many behaviors not typically seen in domesticated horses are viewed including band stallion/band stallion interactions, herding instincts, helper stallions, stallion/foal and mare/mare interactions and much more.

Students experience the real day to day battle for life and the passing on of genes. Along with monitoring the bands, a representative from the Utah Bureau of Land Management discusses management issues, and educates students to the real issues facing the BLM and the wild horses. Participants learn how current issues within the horse industry affect how the BLM works with managing these horses.

A history of the region is dovetailed into this experience. A representative of the Pony Express visits with the group around the camp fire to relive the history of the Pony Express, which traveled through this particular area. A historian from Utah State University teaches the history of the Great Basin, the location of the wild horses, during an afternoon break.

This trip gives students more than they expect. They learn wild horse behavior, how they can apply this knowledge to domestic herds and they gain an appreciation of the history of the region. At completion, students additionally gain an understanding of what managing a wild horse herd requires, why management is important and what lack of management would cause. Students leave this experience better able to educate others about the wild horse existence. While, in the past, this trip has been offered only to USU students, it is now available to equine students across the country.

Learning Objectives:

An understanding of behaviors and interactions of stallions and their bands.

Ability to determine which mare is the lead mare of a band and how she interacts with other band members.

Opportunity to observe daily movement patterns, grazing and watering habits, and rest periods.

Opportunity to observe bachelor stallion band behavior and interactions, and individual bachelor behavior.

Ability to apply knowledge learned from wild horse behaviors to domestic horse management.

Appreciation of the history of the region, and what is involved with proper management of wild horse herds.

This presentation will include a clear idea of how to format and develop a successful, profitable course (internship) appropriate for their region and useful steps that will help avoid pitfalls during the development stage. This is a collaborative effort that makes use of university and state/federal personnel. Day-by-day breakdown of activities and learning objectives for the Wild Horse Course will be outlined, and student insights from this unique experience reviewed. (Could you perhaps include some of these things in your abstract or in the poster?)

Clemson's Creative Inquiry Program

Chris J. Mortensen and Kristine L. Vernon

Clemson University, Clemson, South Carolina

Clemson University provides unique opportunities to assist in funding undergraduate research and other hands-on learning through its creative inquiry program. Clemson University describes the creative inquiry program mission as providing an experience that will be meaningful to undergraduate students, and will promote reasoning and critical thinking skills, ethical judgments, and communication skills as well as a deep understanding of the methods of scientific and/or humanities research. Projects are developed with the goal of developing students' capacities to find, analyze, and evaluate information. Design projects, applied research, service-learning activities, and visual and performing arts projects are considered part of this effort, as well as basic research.

As part of Clemson's Animal and Veterinary Sciences curriculum, undergraduate students are required to complete 3 hours of an experience-based activity, which can include undergraduate research projects. Through Clemson University's creative inquiry program, students in our department with an Equine Business emphasis have garnered experiences in reproductive and exercise physiology research, integrative approaches to horse training, marketing and sales, and other team-based learning experiences. Students have received knowledge that otherwise are not available in other offered courses and have been given opportunities to further develop learned skills while maximizing animal contact hours. The inclusion of undergraduate students in current faculty research projects has exposed students to the scientific method of developing a hypothesis, design experiments to test the hypothesis, execute the study design, and evaluate the information gathered. Many of the undergraduate research objectives in the creative inquiry program are encompassed into current faculty's research and curriculum emphasis areas. Students are expected to fully participate in the creative inquiry project for the semester they are enrolled with a capstone activity of providing a written summary based on their experiences. Evaluation of students is based on their participation and submitted written summary.

The costs associated with inclusion of undergraduates in research-related projects are minimal while decreasing costs by providing a labor force. Students earn course credit for participation and fulfill their experience-based credit requirements. Further, to support these activities the Clemson University creative inquiry program provides up to \$2500 per semester, which offsets the costs of conducting research and provides travel funds to undergraduates who participate and present findings at scientific meetings. Faculty, with participation of these enrolled undergraduate students, have offered equine-oriented clinics and workshops to the South Carolina equine community to further offset costs associated with these programs. Additionally, faculty have solicited and received sponsorships from local businesses. For select activities, such as participation and travel to horse shows, students are required to provide a one-time \$250 lab fee. Grant funding can be sought through the National Science Foundation in interdisciplinary training for undergraduate students within biological sciences with an emphasis on increasing the number and diversity of individuals pursuing studies in all areas of biological research.

Involvement and interest in our equine-oriented creative inquiry programs has increased dramatically since its inception and students evaluated their experiences as important to their professional and personal development. In our experience, it has generated new career goals for students based on these experiences and interest in pursuance of advanced degrees.

Managerial Mentoring Program for Equine Science Students

Jeff S. Pendergraft

Sul Ross State University

Sul Ross State University's (SRSU) equine science program utilizes experiential learning to provide its students with real skills for real life. The main goal of the program is to educate students about the diverse uses of the horse as well as provide them with a solid science background and the skills to be successful in the equine industry. To achieve this goal Sul Ross' equine science program has focused on four main areas: 1) improvement of the equine facilities; 2) the restructuring of equine science courses to utilize state of the art instrumentation, equipment and facilities; 3) the development of a managerial mentoring program for students; and 4) the development of a modeled program that allow students a chance to gain viable realistic workplace experience for the development of life skills throughout their education.

Dr. Pendergraft and six equine science students spearheaded a \$5.75 million addition and renovation proposal of the current animal science building at Sul Ross State University in 1998. This proposal was funded during the 77th Legislature Session in 2001. The original agriculture building and equine facilities began renovations in 2002 and were completed in June of 2006. The new 1,858 m² equine facilities contains 22 full size stalls, 12 miniature horse stalls, 3 foaling stalls, indoor round pen, 3 outdoor round pens, heated and air conditioned reproduction, nutrition, and exercise physiology labs, foaling/manager lounge, tack room, feed room, hay/shaving storage and an attached farrier facility. In 2005 the equine science program was awarded a Hispanic-Serving Institutional grant of \$230,000 over a three year period to develop a program that could recruit and then prepare Hispanic and other underrepresented animal science students for a successful future in the agricultural industry through experiential learning.

To meet this task the equine science program was used to develop a model that could create realistic workplace experiences for students outside of the classroom. The equine science program was divided into five specialized managerial areas: stables, training, nutrition, reproduction and exercise physiology. One equine center manager position with several specialized assistant manager positions were created. The equine science coordinator interviews and hires the equine center manager who in turn interviews and hires the assistant managers. All hiring of positions are supervised by the equine science coordinator. All manager positions are renewable each year. A mentoring program for incoming students was incorporated into the managerial model. The manager and assistant managers are responsible for mentoring their staff. Each incoming student participating in the mentoring program begins their training in the stables area and then worked into the other areas. Students successfully completing the mentoring program can choose to continue their mentoring to gain more experience or apply for a managerial mentoring position.

To complement the managerial mentoring program three experiential courses were developed to increase student's ability to acquire real-life skills. Two courses focused on incoming students while the third course was designed for senior level students. The purpose of this course was to provide the senior level undergraduate student with the scientific application of biological and biotechnological principles in the discipline of horse production and research. Emphasis was placed on advanced principles of nutrition, reproduction, and exercise physiology and the relationship to the efficient production of horses. These courses utilized the three laboratories that were updated with state of the art instrumentation, media and equine handling equipment.

The products from this project included: three laboratories that were modernized by equipping them with state of the art instrumentation; a model for a realistic workplace managerial mentoring program, three new animal science courses; nine animal science courses were restructured; bilingual course supplements were created; ten stipends and one fellowship was awarded; fifty professional web pages were created; twelve cities were visited for recruiting; five abstracts were published; eight presentations were given; and six research projects were conducted. The newly developed and restructured courses had a total enrollment of 478 participants representing 190 students of which 22.1 percent of these individuals were underrepresented animal science students. The managerial mentoring program had 55 students participate and 35 percent of the participants were minority students. Fourteen of these students became mentors and 36 percent of the mentors were Hispanic. Six research and two teaching projects were conducted in the newly equipped laboratories. Six of the eight projects were conducted by Hispanic students. The managerial mentoring model developed at Sul Ross State University from the Hispanic Serving Institute grant can provide students with four years of real-life experience and can be used for any livestock program.

Authentic Learning in Equine Programs

Katrina Merkies

University of Guelph Kemptville Campus

The University of Guelph's new Bachelor of Bio-Resource Management degree in Equine Management is the first and only degree of its kind in Canada, featuring theoretical learning with practical experience. While there are over 150 schools in the USA offering equine programs, Canada is a neophyte in this area. The objective of this program is to produce graduates with a solid understanding of equine anatomy and physiology in relation to management and nutrition, together with a strong foundation in business management. While book learning is an integral part of any educational program, the opportunity for these students to learn outside the classroom provides an exciting challenge.

"Authentic learning" is a pedagogical approach engaging students actively in the learning process with results of their efforts seen beyond the classroom walls. Each student brings with him or her a unique set of talents, experience, knowledge and beliefs that drive learning under guidance from the professor and outside experts. Involving students in real-life tasks increases understanding and application of theoretical concepts. The "why" of learning becomes clearly obvious when concepts are applied to projects that are relevant. Student motivation is high as they put their efforts into solving meaningful problems by analyzing, evaluating and manipulating information to produce a product that can be shared with an outside audience. The students can be proud of their accomplishments when they see a useful impact of their labours.

One example of authentic learning is the two-semester Equine Event Management course (EQN*1060 and EQN*1070). Students learn the intricacies of organizing and managing a variety of equine events varying from horse shows and clinics to trade fairs and festivals. The students put their theoretical knowledge into action as they are completely responsible for organizing and managing a variety of events hosted on campus and open to the public. Press releases written by the students are often published in local papers, further demonstrating an impact of their efforts.

Together with providing opportunities for students to "learn by doing", hosting clinics and events provides a means to generate revenue to put back into the program and the facilities. Our signature event is the "Balance in Motion" symposium held every October, featuring keynote speakers on balancing the body and mind of both equine and human athletes for optimal performance. While much planning goes into this event during the summer, students become involved as soon as they arrive on campus in September. Students are made aware of the costs involved in hosting the symposium, and learn how important marketing is to the success of an event.

Most of the equine events run on campus are intended to be cost-recovery, and students develop a rubric for characterizing the "go – no-go" decision based on a breakeven point. If a "no-go" decision is reached, students must develop a contingency plan for future success. Students also learn that while costs must be justified, sometimes it is necessary to spend money to make money. Students play an active role in our promotional activities through designing and manning interactive workshops for prospective students visiting campus during our open house in March, and participating in promotional booths at

equine trade fairs such as the Royal Agricultural Winter Fair in Toronto, and the Can-Am Emporium in London. Last fall the students hosted the Friesian Keuring for Eastern Ontario, and the Ambassador to the Netherlands who attended was highly impressed by the immaculate presentation of the facilities and the smooth running of the event.

Students have a chance to leave a legacy by soliciting a sponsor to donate funds for the design and construction of a horse jump. Students utilize their building and creative talents to construct the jump, which then provides an advertising opportunity for the sponsoring company. Last year the students constructed a "Greenhawk Harness and Supply" jump, which was subsequently used in our annual College Royal Horse show, and Greenhawk themselves borrowed the jump to display at their tack booth for three weeks at the Capitol Classic Horse show in Ottawa.

These are just some of the examples of intensive learning that our students experience. As these graduates begin to forge their way into the industry, they will have an edge not only with their theoretical knowledge, but with practical knowledge gained through authentic learning. As career people, they will continue to promote their program and to increase public awareness of the impact that this program will have on the equine industry.

Equine Internships at Cazenovia College

Carol Buckhout

Cazenovia College, Cazenovia, New York

The benefits of experiential learning have long been recognized and documented. The ability of the student to apply his or her theoretical knowledge in a real world situation makes learning relevant and meaningful. This is especially true in the equine industry since many daily activities involve practical applications. Equine Business Management majors at Cazenovia College are required to complete 1- three credit internship (equal to a minimum of 120 hours of work). The internship is a 400-level course that students complete either during the summer prior to the senior year or during the senior year. Course pre-requisites include the completion of 90 credit hours prior to taking the internship course and the successful completion of BU 360: Advanced Principles of Equine Business Management (included in the 90 credit hours). In keeping with the goals of the Bachelor's of Professional Studies degree (B.P.S.), the internship experience must have a significant management component in order to be approved as an appropriate credit bearing opportunity.

The goals established by the Equine Business Management program for the required internship experience include the following: (1) to provide a way for students to research and experience a potential career; (2) to create networking opportunities between students, industry professionals and the College; (3) to supplement the classroom learning environment; and (4) to inspire students to begin the career exploration process. The successful internship model suggested by Rogers and Freiberg (1994) of personal involvement, self-initiation and learner evaluation leading to pervasive effects on the learner applies to the format used at Cazenovia College. Equine students are expected to initiate the process and take responsibility for the ultimate success of the experience.

The management component of the internship experience can be difficult to define, but it becomes one of the greatest strengths of the internship experience. Students with career interests in stable management may find themselves at a large facility holding some key responsibilities in budgeting and ordering feed and supplies or in the financial planning process for an expansion or the purchase of a new piece of equipment. They may become involved with writing a procedural manual for new clients or setting up a new horse record keeping system. Many students are able to put their computer skills to work by designing or updating websites, creating brochures or promotional documents and even putting together press kits. Students interested in sales and marketing may shadow a sales representative or assist with a marketing study. Other students that lean toward the not for profit sector could assist with writing a grant proposal or organizing volunteers. The opportunities are numerous.

Outcomes assessment for all Equine Business Management internships are conducted through several different methods. The initiation of the student in the research and exploration phase for identifying an internship site is noted by the Internship Coordinator. A Learning Agreement contract must be completed between the intern and the site supervisor prior to the start of the internship. The written evaluation and oral comments completed by site supervisors are the most pertinent parts of the evaluation process. Interns also participate in a concurrent seminar class that provides a method for sharing

successes and challenges incurred from individual experiences. In addition to discussing assigned management readings and sharing about observed management strategies, students gain support and understanding from each other as they share about their work in the real world. An annual Equine Internship Expo has become a way for interns to showcase their internships and for undergraduates to gain insight into potential internship opportunities. A portfolio that illustrates the internship experiences is the required final project. Students also have the opportunity to evaluate their internship site and their Site Supervisor. Approximately one-third of Equine Business Management interns are offered jobs by their site supervisors upon completion of their internship experience.

Challenges that face students as they contemplate their internship goals include: whether to complete the internship during the summer or during the academic year and whether or not they get paid for their work. A summer internship allows greater flexibility of the internship location, but also requires that students pay summer tuition. Students are treated more often as a professional when they are paid, but paid internships are not currently the “norm” in the equine world.

Cazenovia College Equine Business Management students often rate their internships among some of the most positive experiences gained during their college careers. Their experiences enhance their understanding of the breadth of opportunities that exist to challenge their current notions and understanding of the equine industry. The Industry, the College and students have all embraced this model of applied learning.

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Fostering Synthesis and Evaluation Skills in Fourth-Year Equine Studies Students

Kimberly I. Tumlin, PhD. & Janice L. Holland, PhD., PAS

Midway College, Midway, KY

Midway College offers several degree programs in equine studies which encompass the fields of science, management, business, and learning. In recent years the Equine Studies division focused on curricular alignment in context of challenges that students face in employability. Objectives were developed for the capstone courses, based on student feedback and faculty observation. These objectives should help graduates be more competitive for both employment and graduate opportunities. All students pursuing a bachelor's degree are required to complete a two-credit senior research course. In the course students are provided learning opportunities to synthesize and evaluate knowledge, as well as fostering independent project management skills. The faculty goal for this course is to provide a meaningful independent project that would suit every academic concentration in equine studies.

Midway College has a strong history in teaching and learning; however, as a relatively small, private liberal arts institution, it is often not recognized as a strong influence in research. Within the last five years, the addition of faculty with doctorates, who transitioned from Research I institutions to a liberal arts atmosphere, facilitated the revision of the capstone courses. The faculty is able to guide students during their projects, and students whose projects produce publishable results are encouraged to write papers, under the guidance of the faculty, for publication in trade magazines and in peer-reviewed journals.

An experiential learning model was chosen as the course structure. In this format, a goal is developed by the instructor and the student, but the process in achieving that goal is auto-didactic. This format engages students by physically, emotionally, and mentally enhancing the learning process. Additionally, individual assignment objectives are designed as sequential activities to encourage students to progress through six cognitive levels: knowledge, comprehension, application, analysis, synthesis, and evaluation, with emphasis on the synthesis and evaluation of individual projects.

The project topics align with the equine majors at Midway College with an expectation that students develop a project of their interest relating to potential career paths. Most of these projects are applied or field research; however, in keeping with the diversity of degree offerings, students also have the choice to pursue a grant proposal, research proposal, or strategic business plan. In addition to developing a project idea, students are tasked with completing the project using the available resources, with no funding allocated for research. The location of Midway College in relationship to the Thoroughbred industry, presence of a strong riding program with on-campus horses, and equipment such as therapeutic ultrasound permit students to explore areas that are underrepresented at traditional research institutions.

As part of the research process, students are expected to consult with faculty, staff and equine professionals. These experiences aid students in facilitating written and oral

communication skills learned in previous courses. Furthermore, it is the student's responsibility to collaborate with farm staff to coordinate horse usage. This task fosters management and leadership skills and the understanding that research can and should be conducted without interfering with horse use in other courses. Students apply investigative and analytical skills while reviewing published materials on their topic, and when developing the written project and oral presentations.

Initially, this course consisted of a manageable group of 5 or 6 students per year. With curricular changes, this number has grown to over 35 students per year, with more students enrolling for the course during the spring semester. The course is taught by one faculty member; however, other faculty members assist with the development of topics based on area of expertise. An advantage of the increase in students enrolled is that the diversity of projects encourages interest cross campus. In 2008, the Nursing and Equine Studies departments worked together to offer a Senior Showcase day to highlight the accomplishments of the work completed in capstone projects.

Initially, students often express intimidation due to the scope of the project. Through focus on the research process students learn to apply deductive and inductive reasoning, and often express surprise at their ability to plan, conduct and analyze a research project. Students are encouraged to use logic and relevance throughout the research process, and often identify and solve problems across the curriculum. Further, focusing on the process has allowed the senior project course to not only be the culmination of the educational experience – a change from being a continuation of an internship, but also an exercise in utilizing critical thinking, collaboration, and leadership skills. Ultimately the capstone course is providing meaningful and long-lasting learning as an underlying goal for Equine Studies.

Equine Senior Seminar: A Fusion of Career and Academic Skills

Kimberly I. Tumlin, PhD. & Janice L. Holland, PhD., PAS

Midway College, Midway, KY

The Equine Studies program at Midway College provides a variety of majors, minors and concentrations for students with interests in the equine industry. Although this diversity is a positive attribute for drawing potential students, it can create difficulty in career planning for seniors. In past years, faculty individually provided career advising and associated informal educational experiences to students. During recent curricular reviews, the need for a formalized course in career planning was identified. A fusion of employer, student and institutional perspectives framed development of learning objectives, activities and a capstone leadership portfolio in the Equine Senior Seminar course.

Midway College's equine graduates are often a well-kept secret, because of the institutional teaching focus and lack of student exposure in research and trade publications. In order to determine how to better promote the Equine Studies student, an Equine Advisory Board, which is comprised of primarily Thoroughbred industry employers, participated in an informal focus group regarding employable skills. The results of this discussion revealed three areas: communication, critical thinking, and computer skills that were at least as important, if not more so than practical equine experience.

From the student perspective, the greatest challenge in career planning was being able to market unique skills and qualities. For instance, during informal interviews as part of the Equine Internship course students were asked "How do you convince your potential employer that your four-year degree is more valuable than someone having experience without a degree?" Most students were ineffective in marketing their skills and education as unique and memorable both in a written and verbal format.

Institutionally, Midway College is required by the Southern Association of Colleges to develop measurable outcomes assessment procedures. Unlike other programs, such as Teacher Education, there is not a nationally-recognized exam that seniors can take to assess their knowledge base. To fill this gap, the faculty developed an "Equine Entrance/Exit Exam", which measures student knowledge when they begin their academic career, and also determines what knowledge is retained throughout the years they attend Midway College. Although this exam has been in use for several years, the faculty determined that the senior students were not taking it seriously. To eliminate this problem, the students now take the exam for credit during Equine Senior Seminar, with a minimal score required to pass the course. The faculty analyzes student performance on the exam in order to disseminate content strengths and weaknesses, which may be addressed by curricular alignment of courses.

Based on the aforementioned considerations, the Equine Senior Seminar course was implemented. Students meet weekly in the one-credit course to discuss major employment issues within the industry. These include current topics regarding the economy, impacts of disease outbreaks on employment, and invited industry leaders

discuss which employment skills they value. A series of hand-outs are provided with career planning information; moreover, the classroom environment is designed to promote active learning regarding these topics. Students are tasked with specific activities such as: work scenarios, peer-review of resumes, and marketing exercises. Each exercise is designed to encourage students to speak in groups and in front of the classroom. For example, students were asked to write down career skills which made them unique. This activity was limited to one-minute of reflection followed by one-minute of writing. Students were asked to neither identify their skills, nor share their wording with others in the class. These skill sets were read aloud by the professor and students were asked to identify their peers solely on marketable skills. The lesson in this activity was three-fold: skills need to be communicated clearly and uniquely; the need for critically evaluating both visual and verbal behavioral cues; and highlighting the importance of developing networking skills. Students were then asked to write in a reflection journal on the experience and use the reflection materials to revise their resume. Grading of these activities is based on participation and depth of self-reflections. This grading method shifts the focus off of content and onto learning of life skills. In addition, students improved their ability to critically reflect and see how their future may be impacted.

The Equine Senior Seminar is formally described as: *This capstone course summarizes the student's educational experience in Equine Studies at Midway College and prepares her for a leadership role in the equine industry.* Through this capstone course, students are encouraged to approach career planning as a process that is on-going and personalized. Framing this course using multiple view points on employability provides students with a balanced perspective regarding career skills and content knowledge.

Equine Science in Southwest Texas

Jeff S. Pendergraft

Sul Ross State University

Developing and implementing an equine science program in excellent circumstance can be very challenging. Trying to undertake this responsibility in the economical recession that has affected academic programs across the United States can seem almost impossible. Elimination of programs, increased class sizes, a reduction in class offerings, tuition increases and staff reductions are among the ways universities are trying to address the funding cuts they are receiving from their state legislatures. Sul Ross State University's (SRSU) equine science program is no stranger to these challenges. It has been facing funding and land restrictions as well as having to convince the administration of the School of Agriculture and Natural Resource Sciences that it is a vital program for the Department of Animal Science.

The main goal of SRSU's equine program is to provide its students with real skills for real life. This student centered program tries to give a complete look at the horse and its industry. The objective of the program is to educate students about the diverse uses of the horse as well as provide students with a broad-based curriculum with a solid science background. The equine undergraduate and graduate program features educational resources on all components of the horse industry, including production, industry and research. Students have access to state of the art equipment and facilities. Undergraduate and graduate students have the opportunity to conduct equine research and participate in various activities in the new \$1 million Equine Center and S.A.L.E arena.

The SRSU equine science program gives its students many educational options. The two-year Associate of Applied Science Degree in Farrier Technology is a complete program that carries full university credit and may also be used toward a four-year degree program by students who choose to complete the Bachelor of Science degree. The Bachelor of Science degree offered within the Department of Animal Sciences emphasizes a well-rounded education in equine production, management, training and marketing, nutrition, reproduction, and exercise physiology. An Equine Science Minor also exists for students of other majors interested in pursuing equine studies. Sul Ross offers both thesis and non-thesis programs of study for master's degrees in animal science. The program emphasizes methods of improving or better using agricultural resources and prepares students for doctoral programs and for careers in teaching, extension service, research management and other occupations that require the higher-level abilities of an equine manager or scientists.

The SRSU equine science facilities are completely operated by students allowing them to gain valuable job-related experiences and skills while completing their degree. A managerial mentoring program has been developed and implemented for the equine program. The equine science program was divided into five specialized managerial areas: stables, training, nutrition, reproduction and exercise physiology. One student managerial mentoring position was created for each specialized area and one managerial mentoring position was created to oversee all the specialized area's mentors. It is a

volunteer program that is open to any student, staff, or faculty member on the campus. This approach has allowed more people to be exposed and educated about the impact that the horse industry has in the United States. The program is marketed via its web pages and by word of mouth. Student mentors conduct most of the facility tours and all of the demonstrations for perspective students, campus and community activities and short courses. Perspective students and their parents, as well as anyone else touring the equine facilities are able to visit with students that actually participate in the program. This approach has allowed the SRSU students the ability to demonstrate their acquired skills and have a sense of ownership to the equine science program. The SRSU equine science program has collaborated with the University of Arizona, Kansas State University, New Mexico State University, the Ohio State University, University of Puerto Rico and is currently working on expanding its program into Mexico. The success of the SRSU equine science program has stemmed from the hard work, dedication and commitment from its students.

Development of a Strategic Plan for the Stephens College Equestrian Program: Mission, Vision, Goals, and Student Learning Outcomes

Ellen Beard & Mary C. Hassinger

Stephens College, Columbia, MO

Whether responding to recommendations by accrediting bodies or to various stakeholders (e.g. parents, students, donors), defining the goals and student learning outcomes for an academic program is an important process in higher education. This is especially true in the equine discipline where both traditional and emerging programs are often not well understood by those outside the discipline or by prospective students and their parents. Furthermore, having a well-defined mission, vision, goals, and learning outcomes is an essential basis for creating a strategic plan for an equestrian department.

The Stephens College equestrian program has experienced steady and rapid growth and change in the last five years. Our emerging program contains many elements that faculty feel are essential, including riding in multiple disciplines, core skills founded in business principles emphasizing communication, horse management, and equestrian education, and development of employment opportunities through networking and internships. To organize and better structure these elements and prepare for additional change in the years ahead, equestrian faculty and staff participated over the last year in a strategic planning process and in assessment planning. As part of this, we defined the following: Who are we and who do we serve (mission)? What do we want to become (vision)? How will we move toward our vision (strategic plan)? What are the basic components of our academic program (student learning outcomes)?

This presentation will describe the processes we are using to develop a strategic plan and program learning outcomes. We also will present the results of planning to date: our mission and vision statements, student learning outcomes, and elements of the emerging strategic plan.

Equine Senior Capstone in an IACBE Accredited Business Curriculum

K. Bump

Cazenovia College, Cazenovia, New York

Cazenovia College has been offering a variety of liberal studies and professional degree programs since its historic founding in 1824. Originally a pioneer in education as a seminary offering co-education, in the early 60's Cazenovia College became a private junior college for women. The College offered its first Bachelor degrees in 1982 and has now all but eliminated associate degree programs. The incorporation of a senior capstone experience as a required component of all bachelor degree programs has been in place at Cazenovia College since these programs were first offered. The Equine Studies program began at Cazenovia College in 1974 and a Bachelor of Professional Studies (BPS) Degree in Management with a concentration in Equine Business Management was added in 1995. From its inception, the required capstone experience in the Equine Business Management BPS challenged students to integrate their skills and knowledge from the equine courses with that from the more traditional business management coursework.

In 2005 the faculty in the Management Division at Cazenovia College applied for and received Accreditation of the Bachelor of Professional Studies Degree by the International Assembly of Collegiate Business Education (IACBE). The IACBE accreditation extends to each of the five BPS specializations: Business Management, Accounting, Fashion Merchandising, Sport Management and Equine Business Management. As a result of the accreditation, faculty involved with the Equine Business Management Capstone face the challenge of creating an experience that incorporates three sets of learning goals and outcomes: 1) demonstration of the ability to meet or exceed the learning goals and outcomes set forth in the IACBE accreditation, 2) demonstration of the ability to incorporate knowledge sets from both management and equine disciplines in a single body of work, and 3) demonstration of the ability to meet or exceed the all college competencies required of students in all senior capstones at Cazenovia College (written and spoken communication skills, critical thinking and problem solving, social interaction and group skills, computer literacy, ethics, quantitative skills and social consciousness).

All students in the BPS curriculum experience two Management Capstone courses, with sections offered specifically for equine students. While most equine students choose these sections, they can chose to take a non-equine section and students who are non-equine majors can similarly enroll in the equine section. The series consists of BU 473: Market Research and BU 495: Business Policy and Strategy. While the specific projects in the courses vary each year, the learning outcomes remain the same.

In Fall of 2008, student teams in the Market Research Course conducted primary research for organizations which included: The New York Farm Bureau, Purina Mills Feed, The Pride of New York Program/New York State Department of Agriculture, Weatherbeeta, and The New York State Task Force on Retired Race Horses. In the Spring of 2009, students in BU 495 utilized a case study approach to analyze either a

business or organization to determine 'Tipping Points For Success' using concepts presented in Malcolm Gladwell's mainstream business bestseller, The Tipping Point (2000). Students were required to integrate Gladwell's concepts with classical management and organizational theorists including Henry Fayol, Frederick Taylor, Max Weber, Abraham Maslow, Douglas McGregor, Mary Parker Follett, and Edgar Schein. The students, mostly equine majors, selected topics from a wide range of perspectives including: the incorporation of horses into historical sites; the current state, and future potential, of equine assisted therapy; analysis of the Parelli organization; analysis of success of two equine apparel businesses; miniature horses as guide animals. Students are challenged within the two course capstone sequence to communicate their topics in both written and oral form. The first semester course involves a group presentation and the second semester course involves a formal senior defense by each student. This defense includes a 'blind' evaluator who reads the written project and, following the oral presentation, is part of the panel that questions the student on his/her work.

Students most frequently find the Senior Capstone sequence in the Equine Business Management curriculum to be overwhelming, and often question their ability to undertake a project of this magnitude. They would most often prefer to take on material primarily focused on the equine aspects of their degree program as opposed to be challenged to fully integrate the equine and management literature in a final project. However, at the end of the process, most students are amazed at what they have completed, impressed with the product of their work, and overwhelmed with how far they have progressed in their own capabilities. In this sense the capstone truly serves as a culminating experience.

Educational Opportunities in the Kentucky Equine Management Internship Program

L. A. Janecka

Kentucky Equine Management Internship Program, Lexington, Kentucky

The Kentucky Equine Management Internship (KEMI) program was established to provide college students with an opportunity to supplement their educational experiences in college, to gain hands-on experience with horses and to provide an insight into, and opportunities for, employment in the equine industry upon graduation from the program. Interns work full-time on Central Kentucky Thoroughbred horse farms for 22 weeks and also meet at least once per week for an educational lecture, demonstration or discussion. Since its establishment in 2000, the KEMI program has provided equine internships to approximately 350 students from across the United States and several foreign countries.

Interns select one of two KEMI sessions (but are free to attend both sessions), based on their personal goals within the equine industry. Those students who are interested in reproduction attend the KEMI program in the Spring (January – June) where they are exposed to mare and foal care, including the foaling process; reproductive issues and concerns of the mare; foal diseases and foal management; and the live cover breeding process. Lectures scheduled in the Spring session are based primarily on reproductive issues of both the mare and stallion and the health and nutrition of the mare and growing foal. Those interns with an interest in training or sales and marketing attend KEMI during the Fall internship session (July – December). During this session, the interns have two choices, breaking yearlings on one of two farms, or the majority choice, working with weanlings, yearlings and mares that will be sold at public auction during the months of September, October and November. During the Fall session, the interns work with young horses and prepare these animals for their eventual lives as Thoroughbred race horses. Educational lectures for the Fall internship session focus primarily on sales and marketing; training and injuries of performance horses; feeding and nutrition for optimal performance and industry issues.

Interns entering the program have already been exposed to basic horse handling, nutrition and reproduction and the KEMI course then builds on that basic knowledge and puts the student into a “real-world” situation of living and working on a commercial horse farm. Through the daily work on the farm, exposure to management decision making and the educational lectures, it is the intent of the KEMI program to develop employable, entry-level management personnel for the equine industry. What we have found however, is that KEMI graduates are in high demand for all facets of the equine industry. Approximately 95% of KEMI graduates have a job offered to them upon completion of the course. While most remain in Central Kentucky, KEMI graduates have found lucrative positions in other areas of the United States and abroad as well as with breeds other than the Thoroughbred.

Advancing the Equine Academic Discipline through increased cooperation
and communication

NAEAA

NATIONAL ASSOCIATION OF EQUINE AFFILIATED ACADEMICS

The National Association of Equine Affiliated Academics (NAEAA) encourages increased cooperation and information sharing between colleges and universities with undergraduate curricular offerings in fields affiliated with equine disciplines.

Goals

- **Provide a venue to share ideas and information concerning equine programs.**
- **Provide assistance to colleges and equine programs to develop, expand and improve curricular offerings.**
- **Develop a comprehensive database of “best practices” —ranging from the optimum number of students in a riding class to ways to work with animal right activists on or near a campus.**
- **Provide assistance to faculty/staff in developing program quality standards for informal assessment or required formal assessment.**
- **Develop national and international internship and exchange opportunities for students in member institutions.**
- **Develop faculty exchange programs between member institutions.**

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