



CAL POLY

SAN LUIS OBISPO

College of Agriculture, Food
& Environmental Sciences

Enterprise Projects 2014-2015



MEMORANDUM

To : **Agricultural Science and Agricultural Communication** Date: Fall, 2014
Majors and Other Interested Cal Poly Students,
Faculty and Staff

Copies: Andy Thulin
Mark Shelton
Richard Cavaletto
Karen Aguilar
AGED Faculty

From : Bill Kellogg, Professor
Agricultural Education and Communication Department

Subject: **Participation in College of Agriculture, Food and Environmental Sciences
Enterprise Programs**

As a student at Cal Poly, you have a unique opportunity to gain hands-on experiences in agricultural enterprises or through work experience on campus. These experiences will serve to strengthen your agricultural studies, while at the same time, provide you with knowledge and skills that lead to a fuller understanding and appreciation of important production, managerial, and marketing challenges in agriculture production. In addition to the knowledge and experiences gained by conducting an enterprise or work experience, some students also earn money for their college education. Students participating in enterprises earn units that are reflected on their Cal Poly transcript.

Enterprises are available to you in various departments in the College of Agriculture, Food and Environmental Sciences. A comprehensive listing and a description of the enterprises are found on the attached pages. The Cal Poly Corporation will financially support your endeavors. You will work closely with a faculty advisor who will direct the enterprise. In some projects, profits from enterprises will be shared among participating students, with a percentage also going to the department coordinating the activity. If an enterprise loses money, the department conducting the project absorbs the loss. This financial, risk-free, opportunity can provide you with great learning opportunities!

The enterprise projects have long been an integral component of the Agricultural Education and Communication curriculum, and many students have gained the critical management skills necessary to be competitive in production and allied industries – including teaching.

For a complete description of the enterprise program, please consult with an Agricultural Education and Communication Department faculty member, or contact a project advisor directly. Now is the time to make arrangements for enterprises or work experience opportunities conducted at any time during the year.

Animal Science Department *

Name of Enterprise		Quarters Enterprise Offered	Faculty
Artificial Insemination- Beef.	ASCI 490	Fall	Lazanoff
Biotechnology Enterprise	ASCI 490	Winter	Peterson
Equine Breeding	ASCI 490	Winter/Spring	Burd
Broiler	ASCI 290	Fall/Spring	STAFF/Spiller.
Bull Test Student Managers	ASCI 490	Spring	Retallick
Bull Test	ASCI 290	Fall/Spring	Retallick/Lazanoff
Calving	ASCI 290	Spring	Retallick
Egg Production	ASCI 290	Fall/Winter	Spiller
Equine Breeding	ASCI 490	Winter/Spring	Burd
Equine Judging	ASCI 290	Winter/Spring	Baker
Equine Management	ASCI 200	Fall	Baker
Equine Nutrition Research	ASCI 490	Winter/Spring	Edwards
Escuela Cow Calf	ASCI 490	Fall/Winter/Spring	Lazanoff
Fistulated Cow	ASCI 490	Spring	Peterson
Foaling	ASCI 290	Winter/Spring	Baker
Goat	ASCI 290	Fall/Winter/Spring	Reynolds
Halter Fitting	ASCI 290	Fall	Lazanoff/ Reynolds
Lambing	ASCI 290	Winter	Reynolds
Mare Care	ASCI 290	Fall/Winter/Spring	Baker
Quail	ASCI 290	Spring	STAFF/Spiller
Quarter Horse	ASCI 490	Spring/Summer	Agalos
Rangeland Resource Planning	ASCI 490	Fall/Spring	Horney
Reptile Husbandry	ASCI 290	Fall/Winter/Spring	Benson
Swanton Pacific Stocker	ASCI 290	Winter/Spring	Horney
Swine Management	ASCI 290	Fall/Winter/Spring	Rincker
Thoroughbred	ASCI 290/490	Fall/Winter/Spring	Noland/Sprayberry
Tortoises	ASCI 290	Fall/Winter/Spring	Benson
Vet Clinic	ASCI 290	Fall/Winter/Spring	Sprayberry
Western Bonanza	ASCI 490	Fall	Rinckert

Advisor Names and Office Locations:

Mr. Pete Agalos	10-110B
Ms. Natalie Baker	Bldg 32
Ms. Bree Benson	10-147
Dr. Matt Burd	10-112
Dr. Mark Edwards	10-147
Dr. Marc Horney	10-101
Mr. Aaron Lazanoff	Beef Center
Dr. Jaymie Noland	10-141
Dr. Dan Peterson	10-110C
Ms. Keela Retallick	10-117
Ms. Elizabeth Reynolds	10-140
Mr. Lee Rinckler	10-129D
Dr. Kim Sprayberry	10-148
Dr. Robert Spiller	11-254

* Visit the ASCI Department Web Page for photographs and additional project details (www.calpoly.edu/~asci).

Dairy Science Department

Work Experience & Special Problems	Advisor	Duration
Dairy Unit Work Experience	Silacci	Contact advisor
Dairy – Manufacturing/Marketing	Crabb	Contact advisor
Project Dairy	Berning	Contact advisor

Advisor Names and Office Locations:

Dr. Leanne Berning	10-144
Dr. Charlie Crabb	10-121A
Mr. Rich Silacci	18-100

Food Science and Nutrition Department

Commercial Accounts	Advisor	Duration
Food Science Production (Cal Poly Chocolates, BBQ sauce, Jams, and Salsa) FSN 201-401)	Coleman	Every quarter

Advisor Names and Office Locations:

Mr. Brandon Coleman	24-107H
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Note: The projects done in this department are conducted as a commercial account. These are done as class projects. There are student managers for these projects.

Horticultural and Crop Science Department

Ornamental Projects:

Enterprise	Advisor	Duration
Flowering Plants: Poinsettia, Annual Hanging Baskets Easter Lilies, Hydrangeas, Mums	Walter	Easter Lilies: October to April Poinsettias: March to December
Indoor Foliage Plants	Haslett	July to June

Forage Enterprises (CRSC 202/402):

Enterprise	Advisor	Duration
Forage: Alfalfa, Corn Silage, Sudan Grass, Oats and Triticale	Wong	September to June

Fruit Enterprises (FRSC 202/402):

Enterprise	Advisor	Duration
Fruit Tress: Citrus/Avocado/Deciduous Bees (Honey)	Garner TBD	January to December September to June

Vegetable Enterprises:

<u>Enterprise</u>	<u>Advisor</u>	<u>Duration</u>
Hydroponic Vegetables	Walter	TBD
Vegetable and Field Crop: Asparagus, Artichokes, Broccoli, Cauliflower, Head Lettuce, Sweet Corn Tomatoes, Peppers	Wong	July to June
Hydroponics Vegetables "Tomato Mania"	Walter Hoover	TBD January to April

Organic Farming (Vegetables and Fruit) Enterprises:

<u>Enterprise</u>	<u>Advisor</u>	<u>Duration</u>
Certified Organic Food Crops	Headrick	Available every quarter

Advisor Names and Office Locations:

Dr. Lauren Garner	11-237
Joseph Haslett	jhaslett@calpoly.edu
Dr. David Headrick	11-235
Dr. Ben Hoover	11-251
Ms. Virginia Walter	11-239
Dr. Jeff Wong	11-222

Natural Resources Management Department

<u>Enterprise</u>	<u>Advisor</u>	<u>Duration</u>
Fire Wood Sales	Gill	All year, starts fall quarter

Advisor Names and Office Locations:

Dr. Samantha Gill	11-257
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Enterprise and Work Experience Descriptions

The following is a brief description of the enterprises that are available in the College, or have been offered before. Not all of these projects are available every year.

Animal Science Department

Swine: Enterprises are started periodically throughout the year whenever pigs and space are available. Students are responsible for the daily feeding and management of feeder pigs. Enterprises consist of two person teams and usually last up to four months in length. Market hogs are sold on-campus and through open-market sales.

Show Project: Care, management, feeding and preparation of animals for show and sales. Responsibilities include feeding, halter-breaking, and preparation of show cattle.

Feeder Calf Enterprise: Usually a small number of students (6-8) participate on this enterprise that consists of halter breaking and fitting a small group of feeder calves. Calves are then sold by private treaty.

Commercial Breeding Cattle enterprise (Escuela Project): Fifteen students care for the Foundation commercial cow herd on the 2,000 acre Escuela Ranch. Breeding, calving, feeding, and ranch management practices are performed for the yearlong enterprise. The ultimate product is the sale of the calf crop. The enterprise is open to juniors and senior level students. ASCI 311 is the suggested prerequisite.

Cattle Fitting: Students work to halter break animals for show. Humane and safe precautions are practiced on gentle heifers. Students are responsible for daily feeding, care, and working of animals. Students will show the heifers during the University's spring quarter Open House.

Calving Enterprise: Students are involved in the daily observation and feeding of first-calf heifers. Students monitor and observe signs of calving and assisting in dystocia cases. A detailed record keeping process is practiced. ASCI 241 and 311 are suggested prerequisites. Junior and senior level students are preferred.

Artificial Insemination (AI) Enterprise: Students are trained in artificial insemination, synchronization and advanced breeding practices of beef cattle. Responsibilities include daily feeding, heat check, and artificial insemination of approximately 200 head of heifers and mature beef cows. Requirements include the successful completion of ASCI330.

Bull Test: The enterprise involves a team of 30-35 students working together on the project. The enterprise begins during spring quarter and ends with an auction in October. During this period of time, students are responsible for the daily feeding and health care of nearly 200 independently owned bulls. Students acquire performance data throughout the project period and develop a sales catalogue. The enterprise coordinates a two-day beef cattle field day and bull sale.

Stocker Calf: The objective of the stocker enterprise project is to gain experience in the stocking segment of the beef industry. This enterprise is conducted at Cal Poly's Swanton Pacific Ranch in Davenport, located in Santa Cruz County. Stocker calves are brought to the ranch during January and maintained in a retained ownership agreement with the owners of the cattle throughout the duration of the grass-growing season. The enterprise project students' travel to Swanton on weekends to perform health work, develop feeding programs, and make management decisions. Requirements: Junior and/or senior status preferred; basic horsemanship skills; students need to supply their own riding equipment; and, provide their own transportation to the ranch when required.

Breeding Soundness Evaluation Enterprise: Training in the collection and evaluation of semen for evaluating breeding soundness in bulls. Short duration and concentrated work. Requires completion of ASCI 401.

Embryo Transfer: Training in the management, feeding, synchronization, breeding and flushing of donor females, transfer and freezing of embryos. Daily responsibilities for feeding, synchronization of cows, heat check, and assisting in the flushing and transfer of embryos.

Lamb Feedlot: Students provide daily feeding, care, and the marketing of lambs raised in dry lot or on pasture. A good "starter enterprise" for students looking to enter the enterprise program. Some carcass follow-up is involved. No prerequisites.

Ram Enterprise: Students are involved in the selection, feeding, care, evaluation, preparation and sale of range rams. The enterprise is designed to benefit students who hope to be involved in the seedstock production business, or in the large-scale range sheep industry. Experience with sheep is preferred.

Commercial Ewes (Serrano): Care and management of a commercial ewe flock. Includes budgeting, forage management, feeding, tagging, shearing, wool handling and evaluation, lambing, health care, predator control, selection, culling, and marketing. Designed for the person who is seriously considering going into the sheep business. Some experience with sheep and completion of sheep courses (ASCI 143 and 313 recommended).

Yearling Thoroughbred Horses: Students provide daily management to the Foundation-owned thoroughbred horses. The enterprise involves selling at the Barrett's sales (Pomona) in October. Three to nine students work together on the enterprise. Emphasis of the project involves grooming, gentling, and exhibiting horse in preparation for sales. Students do not ride horses in preparation for sales. Excellent industry contacts are made.

Quarter Horses: Daily management of the Cal Poly Foundation horses. The end goal of the enterprise is to market horses at a two-year old in- training sale, such as the Snaffle Bit Futurity. Students begin with two-year-old horses and provide all management and training for the horses. Six students compose the enterprise and each has direct responsibility for the training of two horses. During the summer quarter they are expected to travel extensively.

Ranch Horse Enterprise: Students start with two-year-old horses that have been donated to the Foundation. The "spirited" horses are trained, then marketed, at a Cal Poly sale. During fall quarter, students ride older horses that need to be "tuned-up."

Breeding Enterprise: Ten students are selected for the enterprise. The enterprise manages the Cal Poly equine-breeding farm for six months. Under faculty supervision, students will tease mares, determine estrus cycles, collect semen from stallions, artificially inseminate mares, and provide foaling assistance. Embryo transfer skills are also developed.

FFA: Students on this project prepare for and help to conduct the State FFA Livestock judging contest held on the first Saturday of May each year. Students develop skills in livestock preparation and refine their showing skills.

Broilers: A student will start with day-old chicks and raise them to a market weight. Past enterprises have consisted on 50-350 birds. The enterprise involves daily care and management. Near completion of the enterprise, students will process the birds and sell a packaged product to the campus store. This enterprise is easily completed in one quarter (7 to 9 weeks).

Replacement Pullets: Starting with day-old chicks, this extended brooding project allows an opportunity to practice the skills of vaccinating, beak trimming, and growth management. Upon completion of the enterprise the birds will be added to the Cal Poly laying flock. One student usually conducts this enterprise.

Laying Hens: Each enterprise consists of 500 to 1,000 laying hens. The student provides for the daily care and management of their enterprise, including feeding, egg collecting and washing.

Meat Harvesting and Processing: This enterprise consists of 6 to 9 students who custom harvest livestock at the campus' federally inspected abattoir. Students usually spend one day per week

working on this enterprise. Custom harvesting is done for community members with carcasses being delivered to local meat shops. Students also cut, wrap, and sell fresh meat product.

Value Added Processing: (Summer Sausage, Beef Jerky, Linguica, Ground Beef Patty and other misc. meats): Depending on market demand, three to six students will process these products in the Cal Poly's federally inspected meat shop. Product is made at various times throughout the year. Their product is sold through the campus store, as well as to members of the San Luis Obispo community.

Dairy Science Department

Dairy -Husbandry: Up to ten students can participate on this enterprise project. Students purchase approximately 30 heifers on the open market then implant them with embryos from top Cal Poly cows. The students manage the heifers during the gestation period, and then sell the offspring. Heifers that will not accept an embryo transfer are then bred naturally to bulls on the dairy. These cattle are then sold as replacement heifers before freshening. First preference for this enterprise goes to Dairy Science majors.

Also available at the dairy unit is the opportunity to “work for pay” milking cows, feeding calves, mixing feed, and working on various projects.

Dairy – Manufacturing/Marketing: Students involved in this enterprise project process milk that is produced by our campus dairy. A number of dairy products (i.e. cheese, ice cream, etc.) are processed for sales both on and off campus. Students use the new Dairy Products Technology Center and gain first-hand experiences in dairy processing. The processing plant is one of the most modern in the country.

Food Science and Nutrition Department

Holiday Ham Enterprise: This short-term enterprise involves processing smoked ham for holiday sales (Thanksgiving, Christmas, and Easter).

Misc. Canning and Preserves: Jams, salsa, and other processed food products are manufactured and packed in the food processing plant. Usually 6-9 students are involved in the enterprise with sales being conducted primarily through the campus store.

Cal Poly Chocolates: Students need to enroll in either FSN 201 or FSN 401. This product involves six hours of production per week. Students are involved in product formulation and merchandising.

Horticulture and Crop Science Department

Enterprises in this department primarily produce seasonal plant products, with enterprises lasting for up to three quarters. Examples of the more popular enterprises include poinsettias, Easter lilies, mums, miniature roses, ground covers, bedding plants, hanging baskets, and novelty plants. Students are encouraged to produce enterprises that are grown and marketed quickly. Some enterprises are operated by student organizations and employ student labor. Students have access to the many greenhouses and the entire growing area at the 15-acre Environmental Horticultural Science Unit. Enterprises may be grown and marketing under contract to off-campus businesses or sold through the Poly Plant Shop. Some enterprises find successful sales at the popular San Luis Obispo Farmers' Market.

Field Crop Enterprises (Silage Corn, Safflower, Garbanzo Beans and other dry beans, seed crops, Oat/alfalfa and Vetch hay, Feed Grains (oats and barley, Oat Hay/Barley Hay, Wheat/Barley, and Certified Seed): Although some field crops are irrigated, most of the crops are dryland cultivated and are planted as climate and student desire dictates. Each enterprise varies in size from 5 to 25 acres. Two to 8 students composed the enterprise. Some crops are grown under contract (i.e.

certified seed) while others are sold directly to other Cal Poly enterprises (i.e. dairy, beef cattle). Students also assist with off-campus sales of the product.

Grape Enterprise: This enterprise consists of growing wine grapes. Usually 15-20 students are involved in the enterprise that is fully responsible for yearlong operation of the vineyard. Wine grapes are sold to local wineries and processed into premium quality Chardonnay and Pinot Noir wine.

Deciduous Fruit Enterprises (Apples, Peaches, Plums, Apricots, Pears and Walnuts): This enterprise involves the care and management of nearly 10 acres of trees. Twenty students conduct this yearlong enterprise. Students sell fruit at local supermarkets, Farmers markets, and through very successful U-pick sales held on a regular basis.

Citrus and Avocado Enterprises (Valencia and Navel Oranges, misc. citrus, Avocados, Lemons, and misc. subtropicals): Twenty to 25 students are involved on this enterprise team. Students provide yearlong care to the campus orchard and sell fruit to retail outlets, at farmers' markets, U-picks, and at the campus store.

Bee Enterprise: Up to four students are involved in monitoring the Foundation-owned hives, extracting honey, bottling, and sales. At times, the enterprise provides hives for contract pollination in off-campus orchards.

Vegetable Enterprises (Broccoli, Leaf lettuce, Artichokes, Head lettuce, Tomatoes, Sweet Corn, and Peppers): These enterprises vary in size and scope depending on market demand and student interest. Acreage varies from 1/4 to 10 acres. Usually 2 to 6 students work together on an enterprise. Students are responsible to all cultural practices under the direct supervision of the enterprise advisor. Students must market the product through sales to local supermarkets, farmers' markets, and at the campus store.

Plant Protection Enterprises (vegetables and fruit): Working like Pest Control Advisors (PCA's), students monitor crops for pest populations, make recommendations and pesticide applications, and file required forms with the San Luis Obispo County Agricultural Commissioner's office. Typically 6-7 students are involved in each enterprise. Each crop enterprise is assessed a fee to support the plant protection enterprises.

Natural Resources Management Department

Fire Wood Sales: This project is primarily run by the Cal Poly Logging Club, with earning going to support the efforts of the club. The project involves cutting, marketing, and sales of firewood. In the future, it is hoped this type of project will also be expanded into more student managed enterprise projects.

Compiled by Dr. Bill Kellogg, Agricultural Education and Communication Department

Fall, 2014

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