

# Comprehensive Program Review Report



## Program Review - Animal Science

### Program Summary

#### 2020-2021

**Prepared by:** Allison Vander Plaats and Russell McKeith and Kim Pitigliano

**What are the strengths of your area?:** 1. Continued improvements to animal facilities and equipment. A leadup and chute system was set up at the sheep unit, which has greatly improved our animal handling efficiency and given students working knowledge of moving animals through handling facilities. In addition, through VTEA funding, we have purchased a new livestock trailer which will enhance both animal and handler safety and improve animal handling and transportation.

2. A new Veterinary Assisting certificate was launched with great faculty and staff support, as well as student interest. One new veterinary class (VT216) was added to the course lineup in the spring, and students have expressed great enthusiasm for ASCI 117 Veterinary Terminology which launched in the fall. Classes have been at or near capacity, and the program is expected to grow. This program is geared towards preparing students for assistant roles in the veterinary practice by providing them with crucial background information and a set of basic laboratory and animal handling skills.

3. Despite COVID during Spring 2020 and its continuation into Summer and Fall 2020, students remain excited about Animal Science courses, and course enrollment and participation has remained high. Faculty remains excited about teaching and doing what is best for our students despite the challenges of unplanned transition to remote learning and re-evaluating laboratory activities.

4. Development of animal health and handling protocols for our livestock units. Dr. Vander Plaats spent a lot of time and effort writing up protocols for animal health and handling, as well as basic safety measures for students and faculty, with input from Louann Waldner, Russell McKeith, and Matt Prater. These protocols have allowed students to have some sense of independence in diagnosing and treating animals (with faculty supervision), and provided real-life practice in following medical directions, administering medications, following withdrawal periods, and evaluating animals for health and illness. Common husbandry procedures, including tagging, vaccinating, and castrating, have been standardized, which will ensure consistency between faculty and students.

5. We had our first students complete the COS Food Safety Skills Certificate for the Spring 2020 semester. There were 3-4 students that successfully completed this certificate. We will have our second cohort of completes this coming year, and we expect more than the first cohort. This 12-unit certificate teaches students the proper theory regarding food safety from farm to fork, as well as gets them some "hands-on" experience along the way. We believe this program will continue to grow as students understand the many job opportunities in this emerging area.

6. We have added members to our Animal Science Advisory and decided to have one encompassing advisory including Animal Science, Dairy Science, Equine Science, Food Safety, and Vet Science. We have members of our advisory who represent California State University Fresno, feed sale representatives, veterinarians, dairies, nutritionists, and high school Agricultural Educators. We typically meet once in the Spring, but visit individually with Advisory members when necessary. Each one of these segments are critical for our Animal Science Programs to flourish here at COS.

7. This past year we had 24 students complete an AS degree in Animal Science or an AS-T in Animal Science. This is the most degrees that have been awarded in Animal Science in the past 6 years that we know of. We believe students are completing certificates and degrees because they are starting seeing their value since we emphasize their importance in class. In 2019 Animal Science awarded 22 certificates and degrees, 14 of which were AS or AS-T degrees in ASCI.

8. DSCI program growth and course and certificate modifications. With Dr. Vander Plaats taking over the dairy science courses, we reviewed course enrollments and spoke to advisory members, coming to the conclusion to deactivate two perpetually low enrolled DSCI courses (DSCI 108 Dairy Nutrition and DSCI 103 Commercial Herd Management) and reorganize the Dairy Science Certificate. Part of this decision was in response to the Chancellor's reclassification of certificates and degrees - in order to keep the DSCI certificate a certificate, we had to reduce the required units. The Dairy Nutrition course was replaced by ASCI 103, which allows overlap with Animal Science degrees/certificates and is also transferrable to CSU while covering the same information. The elements of DSCI 103 have been folded into DSCI 101 and DSCI 104, which have been reorganized and updated to fit with current industry standards as well. Student participation in dairy courses was low in fall 2019 with new faculty on board, but is expected to increase.

9. Improvements in course sequencing and integration. With review of the Dairy Science certificate, the Animal Science degrees and certificates were also reviewed and slight changes were made to improve course sequencing and clarity to students. We hope that these changes clarify degree and certificate requirements for students, resulting in more applications for degrees and certificates, and a smoother student experience. It also allowed us to add elective options, improving enrollment in previously standalone courses (including VT 109, DSCI 101, and ASCI 130).

10. The Equine unit has purchased two therapy units: the Game Ready Machine and Theraplate. Students will continue to be trained on these units and will be offering these therapies to local horse owners as soon as COVID restrictions are lifted. Learning to use therapy equipment will better prepare students to be placed in veterinary and equine barn management job positions.

11. Animal Science faculty and students continue to do a great deal of outreach activities despite COVID-19: Although we are not able to do these activities this year, we are anxious and ready and hope we are able to continue with these very important activities in FALL 2021. Freshman Field Day, COS Fall Festival, COS Food Booth at the World Ag Expo, and working with the Tulare County Fair Livestock Show and Sale. We are continuing via online (ZOOM) with FFA contests, and was able to help out at the Tulare County Livestock Show and Sale this year.

**What improvements are needed?:** 1. Continuing education for faculty remains important to keep faculty up to date with new information, technologies, and industry trends.

2. Continued improvement of animal facilities. Our pastures are well managed by the Animal Science instructional specialist, but animals lack shelter in these pastures and existing shelters are not mobile. Installing shade cloth or shelters on one end of the pasture would provide animals with shelter during the hot valley summers and improve animal wellbeing and comfort. Additionally, cameras for farrowing and lambing would help faculty and students with parturition throughout the academic year at COS. Currently faculty and student herdsmen check on livestock throughout the night, which is a safety risk to personnel. Technology where faculty and students could access real time video of animals would increase safety of personnel and enhance learning for students.

3. Continued improvement of animal equipment. Currently we are checking our cows for pregnancy using a blood test, which is highly accurate down to 30 days of gestation. However, rechecks are often required, which requires running animals through the chute, and this test doesn't give us information on number of fetuses or allow us to check for abnormalities. An ultrasound machine with a rectal probe would allow our veterinarian faculty member (Dr. Vander Plaats) to quickly and easily diagnose pregnancy, as well as use the ultrasound for student teaching, including pregnancy diagnosis and lung evaluation. Ultrasonography is an increasingly important aspect of livestock production.

4. Student training programs for livestock unit protocols and improved student experience. Before COVID, Russell McKeith and Allison Vander Plaats were working on setting up a training program for all student herdsmen and Work Experience students at the livestock units to ensure that students are not only aware of the protocols' existence, but how to use them correctly and effectively. Dr. Vander Plaats hopes to create a Canvas shell where all our unit protocols and information would be available for herdsmen and enrolled Work Experience students, and to set up an online training program through that shell. Currently students are hired as herdsmen only after they've completed Work Experience and have knowledge of how our units run, but creating a more formal training program would improve consistency in student experiences and knowledge, which will translate to improved animal handling, sick animal identification and treatment.

5. Continued improvement of animal and student worker management. A lot of time has been put into pasture management, but we are still feeding a lot of hay to both cattle and sheep. We also must evaluate how much feed animals are eating to better prepare for the next year and avoid running short on feed or going over budget. In addition, our student workers are more efficient and detail oriented than they've ever been, but improving communication from faculty managers on expectations of

duties and hours is required to maintain our high standard of animal and facility care and stay within student worker budgets. In addition, we plan to continue to utilize Work Experience students to assist student herdsmen, provide valuable hands-on experience for unit volunteers, and stay within budgets. Better advertising and involvement of students during animal work days (vaccinating, castrating, etc) to include student workers and volunteers and provide them with supervised experience (running the chute, moving animals, treating and vaccinating) is also necessary.

6. Addition of a second Animal Science Technician. As the Animal Science program continues to grow, a second technician is necessary for enhanced lab safety and setup efficiency, help with animal breeding programs and birthing assistance (cattle, sheep, and swine), support with facility projects (fence repair, pasture management), and equipment maintenance (tractors, Gator).

7. Enrollment in ASCI 130. ASCI 130 Equine Evaluation is now an elective course for both the ASCI Certificate of Achievement and Associates degree, so that students can choose to take either Equine Evaluation or Livestock Evaluation. Advertisement of this course as an alternative elective course is planned to increase enrollment.

8. Enrollment in ASCI 224. Taught in the fall, Livestock Merchandising is geared toward students who have an interest in raising animals to sell as live animals or as animal products. Course enrollment has had its ups and downs. Evaluation of course content and minor restructuring of the course to emphasize industry applicability (applying knowledge gained to real-life scenarios), then advertising as such, would increase course enrollment.

9. Continue to strive for better course sequencing and clarity of Animal Science classes being offered. This becomes more cumbersome with 3 Full-Time Animal Science Faculty teaching each semester. Hopefully we can assist counselors and COS staff with assisting students with their Student Education Plans. In turn, this will improve program completers in Animal Science, Dairy Science, Food Safety, Equine Science, and Vet Assisting.

11. Animal Science Course Success at COS this past year (academic year 2019) was again lower (74%) than the statewide Animal Science Statewide Success (79%). Factors that could potentially contribute to this is that some students stop attending class and never drop, thus resulting in a failing grade for the course. This skews classroom statistics because many students do well, but failing grades drop the success rate. Compared to 2018, we have increased our Animal Science Course Success by 2 percentage points. Maybe tutorial sessions could increase the success rate for Animal Science Classes, but the question becomes who would conduct the additional tutorial sessions. Other strategies will be discussed this academic year to try and decrease the success gap.

12. Improved student metrics and demographics. It is still difficult to determine which students have chosen Animal Science or Dairy Science as majors versus students who are taking an individual ASCI or DSCI course. We would like to be able to track these students and assist them with getting the courses they need for completion of certificates and degrees.

13. The Equine Certificates completer number was down this year, which could be due to COVID restrictions to students and the instructor not pursuing them more aggressively in Spring 20. The instructor believes there were several students completed that did not apply, perhaps due to COVID and lack of communication. This will be a goal for this semester and finish up in the Spring 21 to encourage program completers to apply for the certificate.

**Describe any external opportunities or challenges.: OPPORTUNITIES**

1. Continued support of local producers of horses, sheep, swine, and cattle to form the basis of our breeding herds.
2. Intercollegiate Horse Show Association (IHSA) horse shows and community equine events to showcase our students and facilities.
3. FFA Field Days and other activities to showcase our facilities and make connections with local 4H/FFA chapters, both students and faculty alike.
4. Sale of COS livestock to local 4H/FFA members to showcase our genetics and present COS as a high quality college experience.
5. Continued student participation in high level internships like the Kentucky Equine Management Internship, Seaboard Foods, and more.
6. Continued participation of student clubs in COS Harvest Fest to showcase our students, facilities, and programs to prospective students and the community.

**CHALLENGES**

1. COVID-19. Due to the very hands-on nature of the Animal Science, Equine Science and Dairy Science programs, students in these courses during spring semester were unable to experience many of the planned labs, which negatively affected their educational experience and deprived them of some important basic skills. We hope to modify labs in the coming year to ensure student safety while still providing them with those essential learning opportunities.

**Overall SLO Achievement:** SLO's for all animal science classes are below the state average measurement for student success for course success. For 2019, COS students had a student success rate of 74% compared to the state average of 79%. Our student success rate increased 2% from 2019. For COS, animal science program completers has continued to be consistent over the past three years with approximately 10 certificates and degrees being rewarded. Equine science shows a drop in 19-20 and is believed to due to COVID and instructor not pursuing certificate information for students. (see in improvements)

**Changes Based on SLO Achievement:** Due to COS student success rates continuing to being lower than the state average in Animal Science, SLO's should be reviewed to see if course success could be improved to meet the state threshold for state wide student success in Animal Science.

**Overall PLO Achievement:** There were 257 students in 10 sections of Animal Science classes in Spring 2019. We had 15 students awarded Animal Science Degrees (AS and AS-T) , 9 students awarded Animal Science Certificates, and 2 students receiving Equine Certificates.

**Changes Based on PLO Achievement:** Similar to last year we need to continue to emphasize completion rates for degrees and certificates. This can be achieved by offering more sections of Animal Science classes, as well as continuing to encourage students to complete their certificates and degrees. An additional technician would be able to assist with more laboratory classes being offered, which would hopefully increase student success.

**Outcome cycle evaluation:** The animal science department has assessed courses and reviewed assessment as listed in Trackdat for Fall 2019 and Spring 2020. The courses that still need to be evaluated in Trackdat are ASCI 111, ASCI 112, ASCI 117. \*NOTE\* ASCI 232 and 120 are deleted courses.

## Action: 2020-2021 Shades for Livestock and Equine Pastures

To purchase permanent shades for COS Livestock and Equine Pastures

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

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**Identify related course/program outcomes:** This fall under many of the outcomes for ASCI classes at COS. We want to provide shade for livestock and equine currently in pastures, which do not have any shade. This is an animal health and welfare problem due to our extreme hot dry summers. To maximize health and wellbeing of the animals shades would drastically improve current conditions.

**Person(s) Responsible (Name and Position):** Russell McKeith, Allison Vander Plaats, Kim Pitligiano

**Rationale (With supporting data):** Animals with a shade structure will have better health, as well as animal welfare status.

Currently the animals have no shade whatsoever. To maximize health and wellbeing of the animals shades would drastically improve current conditions.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

### Resources Description

**Equipment - Non-Instructional -** To purchase shade structures for equine and livestock residing in pastures at COS Livestock Units (Active)

**Why is this resource required for this action?:** Currently, there is no shade available for livestock and equine residing in the pastures. The extreme weather can have negative effects on the livestock and equine well-being. To escape these conditions, shades would drastically improve their overall well-being.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 20000

### Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1 -** The District will increase FTES by 1.75% over the three years

**District Objective 2.1 -** Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

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**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 2.4** - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

## Action: 2020-2021 Student worker management and training

Continue with protocol integration into livestock units, training of student workers and volunteers on how to use protocols, and more strictly manage student worker hours and tasks to stay within given budgets through closer monitoring of hours and tasks and formal student training.

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Allison Vander Plaats, Russell McKeith

**Rationale (With supporting data):** Students are an invaluable part of our COS livestock units, but lack of consistency in training and unclear expectations have led to problems in the past with budgeting hours and the high quality of animal care that we expect. A more formal training program for student workers and incorporation of unit protocols into our animal science courses will give students valuable real-life experience in finding and treating sick animals, and improve their knowledge and safety working around livestock.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

### *Link Actions to District Objectives*

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## Action: 2020-2021 Increased enrollment in Animal Science and Dairy Science courses

Continued evaluation of certificates and degrees, clarification with counselors, and advertisement will result in increased enrollment in struggling courses. Courses to consider include ASCI 130, ASCI 224, DSCI 101, and DSCI 104.

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Allison Vander Plaats, Russell McKeith, Kim Pitigliano

**Rationale (With supporting data):**

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

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## Safety/Mandate Explanation:

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## Action: 2020-2021 IMV Imaging ultrasound with rectal probe

Purchase an ultrasound for pregnancy diagnosis in COS cattle, sheep, and pigs, as well as use as a teaching tool for pregnancy diagnosis, lung evaluation, and lump/bump evaluation.

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:** Related to outcomes in ASCI 110 Swine Science, ASCI 111 Beef Cattle Science, ASCI 112 Small Ruminant Science, and improved care and data collection for livestock health and management

**Person(s) Responsible (Name and Position):** Allison Vander Plaats

**Rationale (With supporting data):** Ultrasonography is an increasingly important part of pregnancy diagnosis in livestock. We currently blood test our cattle, but that doesn't provide sufficient information leading to many retests. Students will practice animal handling, gain familiarity with looking at ultrasound images and how ultrasounds work, and learn to identify pregnant versus open animals. We currently use our convex ultrasound for pregnancy diagnosis of sheep and pigs with great success and student enthusiasm and would like to expand opportunities to cattle (the convex probe is not sufficient for this purpose). The existing equine ultrasound is not sufficient for this purpose due to size and lack of portability.

**Priority:** Medium

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

### Resources Description

<b>Equipment - Instructional</b> - IMV Easi-Scan Go Ultrasound (Active)
<b>Why is this resource required for this action?:</b> Ultrasonography is an increasingly important tool in pregnancy diagnosis, as well as evaluation of other body systems (including lungs, testicles, and lumps and bumps). This machine would be useful for all of our livestock species, allowing students to view what the user is viewing, and improve pregnancy diagnosis.
<b>Notes (optional):</b>
<b>Cost of Request (Nothing will be funded over the amount listed.):</b> 15000

### Link Actions to District Objectives

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percentage points

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

## Action: 2020-2021 Animal Science awards trophy case

Purchase and set up of a trophy case in the Livestock Pavilion to show off student achievements and contribute to student involvement and enthusiasm in Animal Science programs and activities.

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

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**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Kim Pitigliano

**Rationale (With supporting data):**

**Priority:** Low

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

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## Action: 2020-2021 Cameras for sheep and swine units

Purchase cameras to assist with farrowing and lambing of COS Livestock, allowing better monitoring of animals close to giving birth

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:** This is linked to SLOs in ASCI 112: Small Ruminant Science and ASCI 110: Swine Science.

**Person(s) Responsible (Name and Position):** Russell McKeith and Dr. Allison Vander Plaats

**Rationale (With supporting data):** Students will be able to view the farrowing and lambing process easier and more frequently by having it recorded via cameras. Additionally, there are safety concerns for faculty and students who check the animals during the night when the campus is closed.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

### Resources Description

**Equipment - Instructional** - Wireless camera system to observe livestock in the swine and sheep barns. More specifically, the cameras would be in the farrowing room in the swine unit, as well as focusing on the pens in the sheep unit. (Active)

**Why is this resource required for this action?:** Currently we do not have this technology, which will make it easier to check

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the animals more frequently. Present practice is to check the gilts/sows that are getting ready to farrow approximately every 5 hours. This becomes cumbersome when checking the animals when campus is closed due to safety precautions for faculty and student herdsmen. Additionally, this would allow students to observe the parturition process at a later date during the actual class period.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 5000

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## Action: 2020-2021 Learning Models for Equine Students

Reproduction and Hoof learning models are needed for proper hands on instruction in the Equine Classes.

**Leave Blank:**

**Implementation Timeline:** 2020 - 2021

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:** ASCI 22 #4 Upon completion of this course students will be able to list and disseminate function for each major anatomical system of the horse.

ASCI 123 #1 Given a bred mare or reproductive scenario, students will be able to demonstrate understanding proper equine care from gestation through foaling. This will include applying record management to equine health decisions. The student will be evaluated in this area by demonstrating his problem solving ability with a production scenario problem to include health and reproduction. The student must consider all possible management decisions to classify the problem.

**Person(s) Responsible (Name and Position):** Kim Pitigliano

**Rationale (With supporting data):** Agriculture is taught with a hands-on approach. Models will help explain detailed information about two of the most important aspects of equine science, Reproduction and Hoof Care. Students that struggle with day to day lecture will find the models helpful in a lab setting as well as they can be used during the lecture portion of class.

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

## Resources Description

**Equipment - Instructional** - Reality Works-Horse Hoof Model and Horse Uterus Model. SKU#s 43010210 and 43010501 (Active)

**Why is this resource required for this action?:** Items need to be ordered to better explain to and assess students.

**Notes (optional):** LINK to items:

<https://www.realityworks.com/product/horse-hoof-model/>

<https://www.realityworks.com/product/horse-uterus-model/>

**Cost of Request (Nothing will be funded over the amount listed.):** 1500



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## Action: 2019-2020 Increased Enrollment in Animal Science classes

Increase enrollment in ASCI 130 and all the dairy science classes by recruiting students interested in practical skills they can immediately apply to careers in animal science, dairy science, and equine science.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Kim Pitigliano, Allison Vander Plaats

**Rationale (With supporting data):** With increased enrollment, more students will engage in agriculture classes, learn more about agriculture in their daily lives, and therefore apply for certificates and degrees. Additionally, we must analyze our degree and certificate requirements to ensure students are receiving the practical experience and knowledge they need to work in the fields of animal science, dairy science, and equine science.

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

<b>Update on Action</b>
<p><i>Updates</i></p> <p><b>Update Year:</b> 2020 - 2021 <span style="float: right;">08/31/2020</span></p> <p><b>Status:</b> Continue Action Next Year</p> <p>With addition of ASCI 130 as an elective course to the ASCI Certificate of Achievement and Associates degree, enrollment has slightly increased. DSCI course enrollment has also increased, partially due to deactivation of perpetually low-enrolled DSCI courses and streamlining of the DSCI Skill Certificate. Continued advertisement of these courses is planned.</p> <p><b>Impact on District Objectives/Unit Outcomes (Not Required):</b></p>

## Link Actions to District Objectives

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**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

## Action: 2019-2020 Increase Degrees and Certificates in Animal Science

Have a greater percentage (20%) of students complete their degree and/or certificate in Animal Science, including certificates in Food Safety and Veterinary Assisting.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:**

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**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Russell McKeith

**Rationale (With supporting data):** Many students in Animal Science do not complete degrees and/or certificates before transferring to a 4-year college or university. Therefore, we need to do a better job of educating students through counseling appointments and instructor interactions with students the importance of completing a degree and/or certificate in Animal Science. Many of the students are completing the appropriate coursework already, so it is coaching them through the process of applying for a degree and/or certificate in Animal Science.

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

### Update on Action

#### Updates

**Update Year:** 2020 - 2021

10/02/2020

**Status:** Continue Action Next Year

We had the most students complete degrees and certificates this past year in Animal Science to date. Additionally, we had approximately 3 students who should of completed their Food Safety Certificate.

**Impact on District Objectives/Unit Outcomes (Not Required):**

### Link Actions to District Objectives

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**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

## Action: 2019-2020 Launch Veterinary Assisting Certificate under Animal Science

Launch a veterinary assisting certificate to provide students with practical skills and knowledge to work in a veterinary setting, or take those skills to work in the fields of animal science, equine science, or dairy science.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Allison Vander Plaats

Rationale (With supporting data): Since the Licensed Veterinary Technician program is no longer active, students with an interest in veterinary medicine have had little opportunity to learn more about the field. With the hiring of a licensed veterinarian in the Animal Science department with both veterinary and livestock knowledge, students have an excellent opportunity to engage in veterinary medicine in a practical way. Revitalizing the program as a Veterinary Assisting program removes the licensure requirements, but allows students to continue their education should they so choose, after learning valuable skills and background knowledge at COS for entry level work as a valuable member of the veterinary team. This certificate will also increase certificates issued by the Animal Science department and improve skills of students who wish to transfer to a 4-year university for veterinary science or pre-vet related majors.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

## Update on Action

### Updates

Update Year: 2020 - 2021

08/31/2020

Status: Action Completed

A Veterinary Assisting certificate was launched and became official for Fall 2020.

Impact on District Objectives/Unit Outcomes (Not Required):

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 2.4** - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

## Action: 2019-2020 Animal Science Awards/Trophy Case

To purchase an awards/trophy case for students to showcase their awards/trophies won at competitions that COS Animal Science students have competed in.

Leave Blank:

Implementation Timeline: 2019 - 2020

Leave Blank:

Leave Blank:

Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Russell McKeith, Kim Pitigliano, and Allison Vander Plaats

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

## Update on Action

### Updates

# Program Review - Animal Science

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Continue Action Next Year

Faculty and facilities team agreed that the easiest place to install would be in the Livestock Pavilion rather than in Building B. Purchase and planning has stalled due to COVID and prioritization of other projects.

**Impact on District Objectives/Unit Outcomes (Not Required):**

## Resources Description

**Equipment - Non-Instructional** - Free Standing Awards/Trophy Cases (Active)

**Why is this resource required for this action?:** Students can display awards for competitions that they have won/competed in as COS Animal Science and Agriculture.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 25000

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

## Action: 2019-2020 Hydration Stations for COS Livestock Units

To purchase hydrations stations to prevent students from getting overheated or heat stroke while conducting laboratories during Animal Science classes.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:** The major concern is student safety because students could overheat or get heat stroke when working with animals when its excessively hot.

**Person(s) Responsible (Name and Position):** Russell McKeith, Kim Pitigliano, Allison Vander Plaats

**Rationale (With supporting data):** We want to prevent students from getting overheated or to get heat stroke. Early in the fall semester, late in the spring semester and during the summer it can be excessively hot outside. Students and student workers need to work with animals for daily care and maintenance as well as during class.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:** We do not want students to get overheated or obtain heat stroke.

### Update on Action

#### Updates

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Continue Action Next Year

Above Base funding approved hydration stations and planning is underway, but hydration stations have not yet been installed due to COVID

**Impact on District Objectives/Unit Outcomes (Not Required):**

# Program Review - Animal Science

## Resources Description

**Equipment - Non-Instructional** - Two Hydration Stations at COS Livestock Units (Active)

**Why is this resource required for this action?:** It is a safety concern because the current water fountains are not sufficient.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 10000

**Related Documents:**

[shopping.png](#)

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

## Action: 2019-2020 Improve transportation of livestock

To purchase a new 20 ft livestock trailer. This trailer would increase animal comfort and well-being during transportation.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 08/13/2019

**Leave Blank:** 05/29/2020

**Identify related course/program outcomes:** ASCI 001: Upon completion of this course students will be able to restrain, move and safely monitor livestock from the pen to the trailer.

ASCI 002: Upon completion of this course students will be able to combine subjective and objective means of livestock evaluation.

**Person(s) Responsible (Name and Position):** Russell McKeith, Kim Pitigliano, and Allison Vander Plaats

**Rationale (With supporting data):** This trailer would increase livestock well-being and humane handling with a new livestock trailer.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:** Livestock would be more safely transported in a new livestock trailer compared to the current livestock trailer.

### Update on Action

#### Updates

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Action Completed

VTEA funding allowed purchase of a new livestock trailer.

**Impact on District Objectives/Unit Outcomes (Not Required):**

## Resources Description

# Program Review - Animal Science

**Equipment - Instructional** - 20 ft. Exiss Cattle Trailer (Active)

**Why is this resource required for this action?:** Students will be able to utilize current industry equipment with loading and unloading livestock at COS. Livestock will be able to be loaded efficiently and more humanely than with the current livestock trailer.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 30000

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

## Action: 2019-2020 Improve Vet Assisting Opportunities for students

Inventory and organize the Vet Tech lab in TCC B-118 and discern what is usable for current courses.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:**

**Leave Blank:**

**Identify related course/program outcomes:**

**Person(s) Responsible (Name and Position):** Allison Vander Plaats

**Rationale (With supporting data):** TCC B-118 was the dropping place for all the vet technology equipment and supplies. The equipment and supplies were not inventoried or organized. Supplies must be categorized and organized so they are able to be located and used for future classes relating to veterinary science.

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

### Update on Action

#### Updates

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Action Completed

Dr. Vander Plaats has reviewed and inventoried supplies and equipment in B-118 and found a lot of usable supplies/equipment. Old equipment needs to be evaluated and either returned to the companies or sold.

**Impact on District Objectives/Unit Outcomes (Not Required):**

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

# Program Review - Animal Science

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

## Action: 2018-2019 Updated technology for student success in the animal unit.

Update and improve video and computer technology in the animal unit lab. Lap top computers are needed for instructional use in and out of a lab setting.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 10/01/2017

**Leave Blank:** 05/31/2019

**Identify related course/program outcomes:** 2012-13 ASCI 001 #2 Upon completion of this course students will be able to list and define pathogen transmission in the food chain and list measures to prevent incidence of disease in livestock.

ASCI 123 #3 Vaccination Outcome Given a lab assignment, students will be able to execute proper vaccine dosage, pharmaceutical drug to be used and administer the vaccine to the assigned horse.

ASCI 22 #4 Given classroom lecture, discussion and laboratory applications, students will be able to disseminate and apply the principles of horse selection.

**Person(s) Responsible (Name and Position):** Kim Pitigliano and Russ Mc Keith

**Rationale (With supporting data):**

**Priority:** High

**Safety Issue:** No

**External Mandate:** No

**Safety/Mandate Explanation:**

### Resources Description

**Technology** - Lab top computer, projector and screen for the animal units laboratory room. (Active)

**Why is this resource required for this action?:** District Objectives

2.1

2.4

SLO

2012-13 ASCI 001 #2 Upon completion of this course students will be able to list and define pathogen transmission in the food chain and list measures to prevent incidence of disease in livestock.

ASCI 123 #3 Vaccination Outcome Given a lab assignment, students will be able to execute proper vaccine dosage, pharmaceutical drug to be used and administer the vaccine to the assigned horse.

ASCI 22 #4 Given classroom lecture, discussion and laboratory applications, students will be able to disseminate and apply the principles of horse selection.

PLO

Upon completion of this program students will have demonstrated industry level competency in the area of nutrition, health, breeding and record keeping.

This computer projector are needed for the animal science and AI science wet lab. This lab is located far from the academic classrooms. Lessons will be improved and expanded with the ability to use this technology.

# Program Review - Animal Science

Department Ranking #3

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 10000

## Link Actions to District Objectives

District Objectives: 2018-2021
<b>District Objective 1.1</b> - The District will increase FTES by 1.75% over the three years
<b>District Objective 2.1</b> - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
<b>District Objective 2.2</b> - Increase the number of students who transfer to a four-year institution by 10 percent over three years
<b>District Objective 4.1</b> - Increase the use of data for decision-making at the District and department/unit level
<b>District Objective 4.3</b> - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.
District Objectives: 2015-2018
<b>District Objectives - 1.1</b> - Increase overall enrollment by 1.75% annually
<b>District Objectives - 2.2</b> - Increase the number of students who earn an associate degree or certificate annually.
<b>District Objectives - 2.4</b> - Increase Career Technical Education course success rates and program completion annually.
<b>District Objectives - 4.2</b> -Improve the efficiency, effectiveness and communication of human, physical, technological, and financial resources to advance the District Mission.

## Action: 2018-2019 Livestock Therapy equipment

Purchase livestock therapy devices.

**Leave Blank:**

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 08/31/2017

**Leave Blank:** 05/31/2019

**Identify related course/program outcomes:** ASCI 001 #1: Upon completion of this course students will be able to restrain, move and safely monitor livestock from pen to trailer.

ASCI 002 #5: Upon completion of this course students will be able to combine subjective and objective means of livestock evaluation.

ASCI 113 #3: Given classroom lecture and discussion, video presentations and laboratory exercises, students will be able to apply the theory of osteology as those concepts relate the the development of animals skeletal system. Mastery of the theory and application of understanding of osteology will be based upon students successful completion of industry based exams.

ASCI 022 #1: Upon completion of this course students will be able to list and disseminate function for each major anatomical system of the horse.

ASCI 117 #3: Given an animal care scenario, students will be able to use the correct terms when combining terms used in different body systems and terms that involve direction, position, and movement. Competency in this area will be tested in a written exam, which students must pass with a score of 75% or higher.

**Person(s) Responsible (Name and Position):** Kim Pitigliano and Russell McKeith

**Rationale (With supporting data):** Purchasing a "Theraplate" therapy device will allow students to understand lameness issues and concepts that relate to livestock locomotion. Allowing students to utilize this machine will teach students the benefits of therapy on all livestock. Many horses in the equine program are donated because of a chronic sub-clinical lameness. This device will allow the extension of the useful athletic life of these animals by alleviating the pain of their chronic condition thus allowing students to use this technology and benefit the student through the extended use time for these horses.

**Priority:** High



# Program Review - Animal Science

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

## Resources Description

**Equipment - Instructional** - "Game Ready" livestock/equine therapeutic machine (Active)

**Why is this resource required for this action?:** A Game Ready can be used by all livestock/equine students to enhance learning animal therapy.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 5000

**Related Documents:**

[game\\_ready\\_horse.jpg](#)

[game\\_ready.jpg](#)

[EQUINE ADVISORY MEETING 1018.docx](#)

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2015-2018

**District Objectives** - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

**District Objectives** - 2.4 - Increase Career Technical Education course success rates and program completion annually.

## Action: 2018-2019 Technology in equine classes

A wireless microphone installed in the horse arena in order to better serve student needs. The wireless microphone will be used by the instructor to talk about various rules, safety measures, strategies and demonstrations in and out of the the riding arena.

**Leave Blank:** Essential for Operation

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 09/01/2018

**Leave Blank:**

**Identify related course/program outcomes:** ASCI 140 Given safety expectations and consequences, students will be able to analyze and apply techniques and practices to proper safe animal handling. Compliance in this area shall be based upon a safety exam with each student passing at the 100% level.

ASCI 141 Maneuver through and over obstacles at various gaits.

IA Womens equestrian: 1. Students will be able to apply techniques and practices to proper and safe animal handling.

2. Students will be able to learn techniques through balance, posture, feet, and leg pressure and use of hands in order to demonstrate various riding patterns on different horses that include, the three gaits: walking, jog, and lope.

3. Students will be able to evaluate horse movements and problems and how to correct various problems through proper and natural aids when riding various equestrian patterns.

**Person(s) Responsible (Name and Position):** Kim Pitigliano

**Rationale (With supporting data):** A wireless microphone is needed for students to hear the instructor more precisely.

**Priority:** High

# Program Review - Animal Science

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:** There is a safety issue in the equine riding arena with hearing what the instructor is saying. When dealing with animals situations can change very quickly and a wireless microphone could lessen the possibility of injury and will also allow students to do activities correctly.

## Resources Description

**Equipment - Instructional** - Wireless Microphone for Equine Area (Active)

**Why is this resource required for this action?:** This microphone is needed for safety and proper instruction in all equine classes.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 6000

**Related Documents:**

[ceecoach\\_portfolio\\_equestrian03.jpg](#)

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

## Action: 2018-2019 Current facility improvements for student success

Improve animal and student health and safety by improving the animal science facilities.

**Leave Blank:** Continued Action

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 09/01/2016

**Leave Blank:** 05/31/2019

**Identify related course/program outcomes:** ASCI 124: Given a laboratory activity, students will be able to lead their horse, with the proper tack, into the round pen and develop safe and proper methods lunging based on the horse's skills.

ASCI 140: Given appropriate modeling of leg aides and movements, students will be able to identify various leg aides that complement the different gaits of the horse. They will also observe and practice proper leads of the horse. Equine industry standards shall be applied to the competency in this area.

ASCI 141: Maneuver through and over obstacles at various gaits.

IA031AD: Students will be able to learn techniques through balance, posture, feet, and leg pressure and use of hands in order to demonstrate various riding patterns on different horses that include, the three gaits: walking, jog, and lope.

**Person(s) Responsible (Name and Position):** Kim Pitigliano

**Rationale (With supporting data):** Student safety can be compromised with excess manure buildup. Loss of instructional time due to temperate weather continues to impact student completion of equine course SLO's. Safety concerns are also an issue when arena is muddy and horse footing is questionable. A cover over the equine arena would not only aide in instruction during rainy season but will also lead to student success because excessive heat during equine laboratories will be mitigated by shade from arena covering.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

# Program Review - Animal Science

## Update on Action

### Updates

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Continue Action Next Year

The equine arena still needs covering. Pasture alleyways still need lighting for student and animal safety.

**Impact on District Objectives/Unit Outcomes (Not Required):**

## Resources Description

**Facilities -** Arena covering 150 X 300 feet for all weather use of arena. (Active)

**Why is this resource required for this action?:** Arena covering is needed so that laboratory lessons can continue regardless of weather. Improved opportunity for industry sponsored equine events.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 2000000

**Facilities -** Enclosed security lockers and storage for students at the equine barn. (Active)

**Why is this resource required for this action?:** Due to increased trespassing and non COS faculty and students entering the livestock area, security lockers are needed for students personal belongings and safety.

SLO's

2012-13 ASCI 001 #7 Upon completion of this course students will be able to define and explain the interaction between, health and performance in commercial livestock.

ASCI 001 #4 Anatomy At the end of this course, students will be able to identify and describe the functions of five major organs in beef cattle, equine and swine.

ASCI 123 Given a bred mare or reproductive scenario, students will be able to demonstrate understanding proper equine care from gestation through foaling. This will include applying record management to equine health decisions. The student will be evaluated in this area by demonstrating his problem solving ability with a production scenario problem to include health and reproduction. The student must consider all possible management decisions to classify the problem.

PLO

Demonstrate knowledge, practical skills and abilities in animal health, ethology, housing and environment, food products, genetics, nutrition, and reproduction to successfully work in the animal agriculture industry.

District Objectives:

2.2

2.4

3.2

Department rank #2

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 7500

**Non-instructional equipment -** Rubber Mats/Rubber Flooring for swine Barn (Active)

**Why is this resource required for this action?:** Necessary to prevent lameness in swine

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 4000

**Related Documents:**

[hog\\_mats.jpg](#)

[0006913\\_rubber-creep-mats-extended-tabs-no-lip.jpeg](#)

# Program Review - Animal Science

**Instructional equipment** - Electricity outlet (Active)

**Why is this resource required for this action?:** Currently no electrical outlets are present at the beef processing facility for labs,. Safety concerns with generator and electrical cords as well as enough amperage to run equipment successfully.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 10000

**Facilities** - Due to wear and tear on livestock equipment a cover is needed to protect equipment against the outside elements and for student safety while traveling or during labs with animal science classes. (Active)

**Why is this resource required for this action?:** A cover is needed for the safety of students and livestock while traveling or in a lab setting. This cover will prevent deterioration and to preserve equipment.

**Notes (optional):** see attached pricing sheet

**Cost of Request (Nothing will be funded over the amount listed.):** 86000

**Equipment - Instructional** - 2018-2019 Equipment and supplies for ASCI 224: Livestock Merchandising Class (Active)

**Why is this resource required for this action?:** Every semester students utilize equipment and supplies for this class. Supplies needs to be recuperated and equipment replaced if broken.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 4000

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2015-2018

**District Objectives** - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

**District Objectives** - 2.4 - Increase Career Technical Education course success rates and program completion annually.

**District Objectives** - 3.1 - Reduce the achievement gap of disproportionately impacted student groups annually, as identified in the Student Equity Plan.

**District Objectives** - 3.2 - Increase training for academic and student services staff and faculty to respond to the unique needs of our student population.

**District Objectives** - 4.2 -Improve the efficiency, effectiveness and communication of human, physical, technological, and financial resources to advance the District Mission.

## Action: 2018-2019 Increased Continuing education for Faculty

Continuing Education for faculty to learn up-to-date animal science reproduction skills and other current industry skills to instruct students on the most current industry standards.

**Leave Blank:** Continued Action

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 09/01/2017

**Leave Blank:** 05/31/2019

**Identify related course/program outcomes:** ASCI 123 Horse Production:  
Course Outcome

# Program Review - Animal Science

1. Given a bred mare or reproductive scenario, students will be able to demonstrate understanding proper equine care from gestation through foaling. This will include applying record management to equine health decisions. The student will be evaluated in this area by demonstrating his/her problem solving ability with a production scenario problem to include health and reproduction. The student must consider all possible management decisions to classify the problem.

ASCI 110 Swine Production:

Course Outcome:

1. Upon completion of this course, students will be able to list and define accepted practices for selecting and maintaining a breeding herd of swine.

ASCI 111 Beef Production:

Course Outcome:

1. Upon completion of this course, students will be able to explain and demonstrate basic breeding, selection practices for beef cattle.

ASCI 112 Sheep Production:

Course Outcome:

1. Upon completion of this class, students will be able to describe and implement a breeding program for the production of lambs.

**Person(s) Responsible (Name and Position):** Kim Pitigliano and Russell McKeith - Animal Science Faculty

**Rationale (With supporting data):** Proper training for current knowledge regarding standard industry reproduction techniques is essential to give students proper training to prepare them for employment in the equine/livestock industry. New animal science facilities in Tulare offer the opportunity for students to have hands-on education utilizing the most current and novel methodology. The Animal Science and Equine advisory committees strongly recommend staying on the cutting edge with modern reproduction techniques, and believe it is essential in utilizing these facilities to their best educational advantage.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

## Resources Description

**Technology** - Funding for classes. Classes that are needed for current industry practices include: Artificial insemination procedures (including deep horn insemination), embryo transfer, frozen and cooled semen, as well as proper bull, ram, boar and stallion handling. (Active)

**Why is this resource required for this action?:** Funding is required because industry training is offered via private companies and training entities.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 2500

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2013-2015

**2013-2015: District Objective #7** - District Objective #7 for 2013 - 2015: Allocate resources based on an accountable and systematic District-wide planning and budget development process that links this allocation to Institutional Program Reviews and the Strategic Plan.

# Program Review - Animal Science

District Objectives: 2015-2018

**District Objectives** - 1.1 - Increase overall enrollment by 1.75% annually

**District Objectives** - 2.1 - Increase the number of students who are transfer-prepared annually.

**District Objectives** - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

**District Objectives** - 2.4 - Increase Career Technical Education course success rates and program completion annually.

**District Objectives** - 3.2 - Increase training for academic and student services staff and faculty to respond to the unique needs of our student population.

## Action: 2018-2019 Program Continuity

To increase student's "hands-on" learning success, as well as enhance animal instructional unit success. It is imperative to hire an animal science technician as well as a new Animal Science faculty member. This action will elevate the animal and equine science programs to the next level.

**Leave Blank:** Continued Action

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 08/01/2017

**Leave Blank:** 05/31/2019

**Identify related course/program outcomes:** The following classes are the classes the animal science technician would assist with: ASCI 001, 002, 022, 103, 110, 111, 112, 123, 124, and 141

General Course Outcomes ASCI classes

1. Upon completion of this course, students will be able to list, define and describe function of all parts of three common livestock digestive systems.
2. Upon the completion of this course, students will be able to discuss the process of meat animal growth, development and finishing.
3. Upon completion of this course, students will be able list and define accepted practices for selecting and maintaining a breeding herd of swine.
4. Upon completion of this course, students will be able to list, explain, and demonstrate basic management practices for beef cattle production.

**Person(s) Responsible (Name and Position):** Kim Pitigliano and Russell McKeith-Animal Science Faculty

**Rationale (With supporting data):** Student safety is a huge concern for students studying animal and equine science. The addition of an animal science technician would enhance the safety of the students by having an additional instructor help with class laboratories. It is known that animals can be unpredictable, and proper handling is necessary to maintain a safe working environment for students. The daily management of the livestock educational laboratories requires the attention of a full time technician. Educational opportunities for students will be vastly improved, and enhanced by the ability current instructors being able concentrate on the laboratory being perform, as well as work closely with the technician. The animal science technician would be responsible for maintaining, setting up and assisting in all laboratory practices including facility maintenance and animal management.

Animal Science data indicates that FTES (14-15 {54.8}) and E-WSCH (14-15 {1,812}), which is a increase in 2013-2014. This could be due to hiring a full-time animal science instructor. Additionally, the Total FTE is up in 2014-2015 (4.2) from 2013-2014.

With the additional of a new animal science instructor, the animal science classes are filling as well as the equine classes. The animal science program is the largest program (FTES) within the Division of Agriculture with 54.8 for 2014-2015. With student safety being a high priority, as well as a high FTES and E-WSCH an animal science technician is necessary to keep improving and growing the program.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

# Program Review - Animal Science

## Update on Action

### Updates

**Update Year:** 2020 - 2021

08/31/2020

**Status:** Continue Action Next Year

A second instructional specialist has not yet been hired. Faculty continue to do much of their lab setup/takedown and animal breeding and handling themselves in addition to their teaching and livestock management duties.

**Impact on District Objectives/Unit Outcomes (Not Required):**

## Resources Description

**Classified- New/Replacement** - New full time classified technician for all animal science units. (Active)

**Why is this resource required for this action?:** Funding is required for this position which has been requested for multiple years. In Fall of 2012 funding was included for this position then later was removed. With the addition of more cattle, horses, sheep, and swine there are additional responsibilities that need to be taken care of. Currently, there is one technician for the entire Agriculture Division. The addition of another technician would allow this person to help set up and assist with more instructional activities, devote more time to livestock/equine instructional projects, as well as continue to enhance the Animal Science and Equine programs here at COS. There are enough animals (over 100 head) and projects currently to warrant another technician to the equine and livestock units.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 50000

**Related Documents:**

[EQUINE ADVISORY MEETING 1018.docx](#)

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2013-2015

**2013-2015: District Objective #7** - District Objective #7 for 2013 - 2015: Allocate resources based on an accountable and systematic District-wide planning and budget development process that links this allocation to Institutional Program Reviews and the Strategic Plan.

District Objectives: 2015-2018

**District Objectives** - 1.1 - Increase overall enrollment by 1.75% annually

**District Objectives** - 2.1 - Increase the number of students who are transfer-prepared annually.

**District Objectives** - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

**District Objectives** - 2.4 - Increase Career Technical Education course success rates and program completion annually.

**District Objectives** - 3.2 - Increase training for academic and student services staff and faculty to respond to the unique needs of our student population.

**District Objectives** - 4.2 - Improve the efficiency, effectiveness and communication of human, physical, technological, and

# Program Review - Animal Science

financial resources to advance the District Mission.

## Action: 2018-2019 Student Safety

Given that all equine laboratories are conducted outside, shade for class during laboratory exercises is mandated for student health. Spray lining for all livestock equipment trailers and wash racks is needed for student and livestock safety and proper handling of livestock. Extra lighting is needed during night class for student safety in pastures/paddocks.

**Leave Blank:** Continued Action

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 08/17/2015

**Leave Blank:** 06/30/2019

**Identify related course/program outcomes:** ASCI 140 #2: Given examples of appropriate physical posturing and guided practice of balance and mounting, students will be able to apply the concepts of posture and proper balance while mounted on their horse. They will also demonstrate different types of reining, including one and two handed techniques while relating leg aides to the horses gait. Equine industry standards shall be applied to competency in this area.

ASCI 140 #3

Given appropriate modeling of leg aides and movements, students will be able to identify various leg aides that complement the different gaits of the horse. They will also observe and practice proper leads of the horse. Equine industry standards shall be applied to the competency in this area.

ASCI 001 #1 Upon completion of this course students will be able to restrain, move and safely monitor livestock from pen to trailer.

(Active)

**Person(s) Responsible (Name and Position):** Kim Pitigliano

**Rationale (With supporting data):** 1. Temperature and sun exposure to students during all equine labs can be mitigated by providing shade for students when participating in equine lab exercises.

2. Non slip flooring is needed for the safety of students and livestock while hauling and bathing animals.

3. Pasture / Alleyway lighting is needed for student safety during night class and livestock night checks.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

### Update on Action

#### Updates

**Update Year:** 2020 - 2021

10/02/2020

**Status:** Action Completed

The lighting for the alleyways/pastures for student safety is asked in another action request.

**Impact on District Objectives/Unit Outcomes (Not Required):**

### Resources Description

**Facilities -** For the safety of student health, shades are needed over the bleacher area at the equine arena. (Active)

**Why is this resource required for this action?:** Shades are needed for student safety during labs.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 95000

**Non-instructional equipment -** Permanent rubber floors for all livestock trailer floors and equine wash rack. (Active)

**Why is this resource required for this action?:** Spray in liner to be installed.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 20000

**Facilities -** Two Pasture alley lights for livestock (Active)

**Why is this resource required for this action?:** Students checking/gathering livestock and equines at night are currently



# Program Review - Animal Science

doing it with minimal/no light. Livestock could pose a safety threat to students and faculty.

**Notes (optional):**

**Cost of Request (Nothing will be funded over the amount listed.):** 60000

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

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**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2015-2018

**District Objectives - 1.1** - Increase overall enrollment by 1.75% annually

**District Objectives - 2.1** - Increase the number of students who are transfer-prepared annually.

**District Objectives - 2.3** - Increase course success and completion rates in pre-transfer English, Math, and English as a Second Language courses annually.

## Action: 2018-2019 Proper sanitation and disposal

Purchase a dump trailer for proper sanitation at the livestock units.

**Leave Blank:** Continued Action

**Implementation Timeline:** 2019 - 2020

**Leave Blank:** 08/17/2017

**Leave Blank:** 06/30/2019

**Identify related course/program outcomes:** ASCI 110: Upon completion of this class students will be able to identify and suggest treatment and prevention for most common swine diseases and parasites.

ASCI 001 #2: Upon completion of this course students will be able to list and define pathogen transmission in the food chain and list measures to prevent incidence of disease in livestock.

ASCI 104 #6: Upon completion of this course students will be able to explain and develop a practical sanitation program for a livestock facility.

**Person(s) Responsible (Name and Position):** Kim Pitigliano and Russ McKeith

**Rationale (With supporting data):** Proper sanitation for all livestock housing requires daily manure removal. This tool will allow for manure management on a scale that will support the educational goals for COS livestock students and staff.

**Priority:** High

**Safety Issue:** Yes

**External Mandate:** No

**Safety/Mandate Explanation:**

## Resources Description

**Instructional equipment** - John Deere 21CF Utility/Dump Trailer (Active)

**Why is this resource required for this action?:** Proper sanitation for all livestock housing requires daily manure removal. This tool will allow for manure management on a scale that will support the educational goals for COS livestock students and staff.

**Notes (optional):**

# Program Review - Animal Science

Cost of Request (Nothing will be funded over the amount listed.): 1100

## Link Actions to District Objectives

District Objectives: 2018-2021

**District Objective 1.1** - The District will increase FTES by 1.75% over the three years

**District Objective 2.1** - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

**District Objective 2.2** - Increase the number of students who transfer to a four-year institution by 10 percent over three years

**District Objective 4.1** - Increase the use of data for decision-making at the District and department/unit level

**District Objective 4.3** - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2015-2018

**District Objectives** - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

**District Objectives** - 2.4 - Increase Career Technical Education course success rates and program completion annually.

**District Objectives** - 4.2 - Improve the efficiency, effectiveness and communication of human, physical, technological, and financial resources to advance the District Mission.