

Instructional Program Review Report

Sierra College, 2013-14

Department/Program Name: Agriculture

Date Submitted: 2/22/14

Submitted By: Michelle Macfarlane

Ideally, the writing of a Program Review Report should be a collaborative process of full-time and part time faculty as well as the appropriate educational administrator, instructional assistants, classified staff members and students who have an interest in the present and future vision of the program at all sites throughout the district. The Program Review Committee needs as much information as possible concerning the present and future of the program to assess and recommend the resources needed to keep the program viable and robust.

Please attach your Department Statistics Report (DSR) and your ePAR Report when sending in your Program Review.

1) Relevancy: This section assesses the program's significance to its students, the college, and the community.

1a) To provide context for the information that follows, describe the basic functions of your program.

The agriculture program serves four groups of students:

- 1) Students who plan to earn a four-year degree in an agriculture discipline at an accredited university (transfer/majors). These students will complete courses that fulfill the lower division transfer core at Sierra College and transfer to institutions like CSUC, CSUF, Cal Poly and UCD as a third year students within the college of agriculture. The transfer core is designed to be in alignment with the lower division requirements for degree transfer. These classes lay the foundation of agricultural understanding for future courses in the discipline. Agriculture embraces many disciplines including soil science, business and economics, animal science, plant science, environmental science, social science and many more. It is crucial for the success of transfer students that the lower division classes offered at this level meet the various components of agriculture.
- 2) Students fulfilling general education requirements (non-majors). The general education courses provide students with information about agriculture and foster a greater understanding of food production and its impact on the environment and society. Some of these courses also fulfill major/transfer requirements.
- 3) Students pursuing a certificate in agriculture to prepare themselves for immediate entry into the agriculture industry as employee or an entrepreneur.
- 4) Students currently involved in agriculture interested in re-training.

1b) How does your program fit within the district mission, as quoted below?

“Sierra College provides a challenging and supportive learning environment for students having diverse goals, abilities, and needs interested in transfer, career and technical training, and lifelong learning. The College’s programs and services encourage students to identify and to expand their potential. Sierra College students will develop the knowledge, skills and abilities to become engaged and contributing members of the community.”

The agriculture program aligns with the District Mission Statement in that the program provides a supportive learning environment by providing students with a learner-centered environment. Diverse student goals are addressed: the need to transfer by offering general education, major courses and career training. The agriculture department offers online courses as well as evening courses. This enables students who may not otherwise be able to travel to campus to take courses. The agriculture program also aligns with the district’s mission as it develops students to become engaged and contributing members of the community by promoting an understanding of food production and the resources utilized for such as well as social issues related to food production.

1c) Program offerings align with which of the following mission categories (check all that apply):

- Transfer
 Career Technical Education
 Basic Skills
 Personal Development/Enrichment
 Lifelong Learning

1d) Please analyze the role of your department’s programs and offerings in supporting the categories marked in 1c above; please provide evidence in support of this analysis. If any of the following apply to your program, please address them in your analysis.

- The number of degrees, certificates, and/or licenses your department has generated
 - The alignment of these awards with the district’s mission and/or strategic goals. (See the district “Awards Data File, available from Research and Planning, for your numbers).
- Job placement or labor market information for your program’s awards and licenses.
- The contribution your program makes to student transfer.
- Participation in basic skills programs.

The number of degrees, certificates, and/or licenses the agriculture department has generated:

Associates of Science in Sustainable Agriculture

Agriculture Technology and Sciences, General-010100		2	1	1	4	4
Animal Science-010200		1	1	1		2

Certificates in Sustainable Agriculture

Agriculture Technology and Sciences, General-010100			1	1	4	4
Animal Science-010200			1	2		2

Skills Certificates in Sustainable Agriculture Business

Agriculture Technology and Sciences, General-010100					2	4
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The program recently went through Program Vitality and developed the degrees and certificates above as a result. These have been available to students beginning in the 11-12 academic year. It is anticipated the number of degrees and certificates will increase. In addition many students transfer without attaining a degree or certificate. The department is making efforts to encourage students to apply for degrees and certificates even if they are transferring by promoting them in classes through utilization of the CTE funded CEL’s.

1d continued...

The Agriculture Department also contributes to Associates Degrees at Sierra College by offering the following general education courses:

- Introduction to Animal Science (Life Science with lab)
- Introduction to Soil Science (Physical Science with lab)
- Introduction to Plant Science (Life Science with lab)
- Introduction to Agricultural Business and Marketing (Social Science)
- Food, Society and the Environment (Life Science & Social Science)
- Introduction to Sustainable Agriculture (Social Science)

In addition, the Food Society and the Environment class and Introduction to Soil Science are also courses fulfilling requirements in the Natural Science Associates Degree.

- Job placement or labor market information for your program's awards and licenses.

Most agriculture jobs are self employment which is not represented in labor market data. The number of small farms is growing in Placer and Nevada counties and most agriculture students are or have the goal of owning their own businesses.

Sacramento-Arden Arcade-Roseville MSA	194011	Agricultural and Food Science Technicians	2010 - 2020	270	2	9	11
Sacramento-Arden Arcade-Roseville MSA	452000	Agricultural Workers	2010 - 2020	5,190	19	157	176
Sacramento-Arden Arcade-Roseville MSA	452091	Agricultural Equipment Operators	2010 - 2020	470	2	14	16

The contribution the agriculture program makes to student transfer:

The Agriculture Department offers the transfer core, which students need for lower division agriculture degree requirements. This core includes the following courses:

- Introduction to Animal Science (also CSU Life Science and IGETC Biological Science)
- Introduction to Soil Science (also CSU Physical Science)
- Introduction to Plant Science (also CSU Life Science and IGETC Biological Science)
- Introduction to Agricultural Business and Marketing (also CSU & IGETC Social Science)

The Agriculture Department also contributes to non-major transfer by offering several general education courses for both CSU and UC including:

- Introduction to Animal Science (CSU Life Science and IGETC Biological Science with lab)
- Introduction to Soil Science (CSU Physical Science with lab)

- 1e) Optional Additional Data: Comment on any other relevance to district goals, mission, values, strategies, etc., that your program provides that are not incorporated in the answers above. Consider, for example, contributions to diversity, campus climate, cultural enrichment, community ties, partnerships and service, etc. Include specific data and examples.

The department currently has a partnership with the LHS Farm. Laboratory courses are held there and joint projects are done with high school students. The agriculture department has a very active Advisory Committee. The department works closely with the committee to align course offerings with industry needs based on the input of the committee. The agriculture department participates in campus events such as Earth Days, Love Your Body Week, Pride Days, African American History Week. Integration of campus event topics into courses occurs whenever possible. For example, students prepare posters which are displayed at Earth Week events. The department regularly reports to the Placer County Agriculture Commission. Internships are offered help at community agriculture businesses and farms. There is an agriculture student club, which is active in the community. Currently the club is working with the First United Methodist Church to establish a garden that grows food to feed the hungry. The department hosts the FFA Field Day attended by area high schools.

Sustainability is an overarching theme in the agriculture department.

2) Currency: This category assesses the currency of program curricula as dictated by Title 5 and the currency of efforts in meeting accreditation standards as well as improving pedagogy and engaging in professional development.

- 2a) Curriculum: Considering the information provided on your Department Statistics Report (DSR), comment on the currency of your program's curricula. If your course currency is below 100%, describe why this is and your department's specific plans to remedy this problem. Please describe your process for evaluating and revising curriculum, including the use of SLOs.

At the time of this report all agriculture courses that were not current have been submitted to the Curriculum Committee to be agenized. These four courses were out of sync with the rest of the agriculture curriculum because they moved over from the environmental horticulture department. Once these courses are heard and approved by the Curriculum Committee 100% currency will be attained.

All agriculture courses are current with SLO's. All courses are in an assessment cycle. The Department Chair and sole full-time faculty member coordinates SLO assessment by collecting data from individual faculty who teach each course.

The Department Chair and only full-time faculty member coordinates the evaluation and revisions of curriculum as well as SLO assessment. Curriculum evaluation and revisions are done in consultation with part-time faculty and are driven by recommendations from the Agriculture Advisory Committee, which regularly meets twice a year as well as the lower division major requirements at the institutions where majors transfer. Faculty consult with transfer institutions as well as feeder high schools at professional meetings throughout the year. At meetings with faculty from four-year institutions discussions regarding preparation of Sierra transfer students occur. Information gleaned is brought back and discussed at department meeting where adjustments are made to content and activities to better prepare though students for success at four-year institutions.

- 2b) Student Learning Outcomes Assessment: Comment on your program's progress in assessment of SLOs, analysis of results, and improvements/changes made to the program. Please provide specific data and analysis in the space provided.

The agriculture department participated in and completed the SLO work in the fall. All of the courses are scheduled to be assessed on the 3-year rotation. Prior to last fall the department did complete assessments for courses and used the results to evaluate the effectiveness of teaching methodologies and techniques to achieve the outcomes. Some examples of changes made from assessment results include changes to wording on exam and quiz questions, including additional hands-on activities in labs to support and reinforce concepts presented in lectures.

- 2c) Professional development: Describe how your department's planned activities and professional development efforts serve to improve teaching, learning and scholarship. Please be sure to include flex activities, departmental meetings and activities, conferences, and the like.

The agriculture department consults for, participates in, and/or hosts the following activities:

1. Agriculture Department meetings
2. Agriculture Advisory Committee (several local agriculture professionals gather to consult and advise on the program, including curriculum, equipment, and future di
3. Reading periodicals and agriculture
4. Watching agriculture documentaries
5. Attending professional conferences (California Agriculture Teachers Association)
6. Instructor training workshops (completing ISW, Leadership Institute, and others offered through Staff Development)
7. Advising the Sierra College Sustainable Agriculture Club
8. Coordinating engineering educational activities with other universities : ~~Example~~ to and working with CSUC and UCD)
9. Traveling on field trips to local industry sites
10. Taking classes from the UC Cooperative Extension
11. Being active members of the agriculture community and owning agricultural enterprises

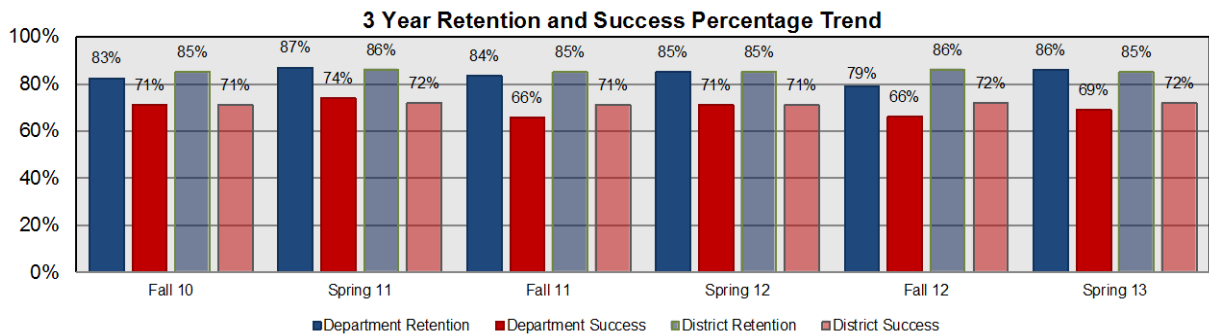
2d) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program's effectiveness and explain why.

At department and professional meetings throughout the year pedagogy is addressed. Dialog continuously takes place between faculty regarding effective delivery of content. Effective delivery is measured utilizing SLO assessment data as well as anecdotal evidence. In AG 198 and 200 students are frequently surveyed for informal feedback regarding content delivery methods. Where possible, faculty include multiple learning modalities to meet the needs of all students and their learning style preferences.

Currently, faculty are working on the development of 3 new courses as a result from suggestions of the Advisory Committee to meet industry demand. These courses will be proposed to curriculum this Spring. The courses are: Sustainable Livestock Production, Sustainable Crop Production and Sustainable Urban Farming.

3) Effectiveness: This section assesses the effectiveness of the program in light of traditional measurements.

3a) Retention and Success: Identify and explain the trends in your program's data. Address separately the data for on ground and on-line course. Comment on the significance of the trends as well as the challenges experienced within the program. If you see a need to improve the statistical trends, outline a plan that will achieve the changes you are seeking. Please refer specifically to the data in your Department Statistics Report, as supplied by the Research and Planning Office, in supplying your answer.



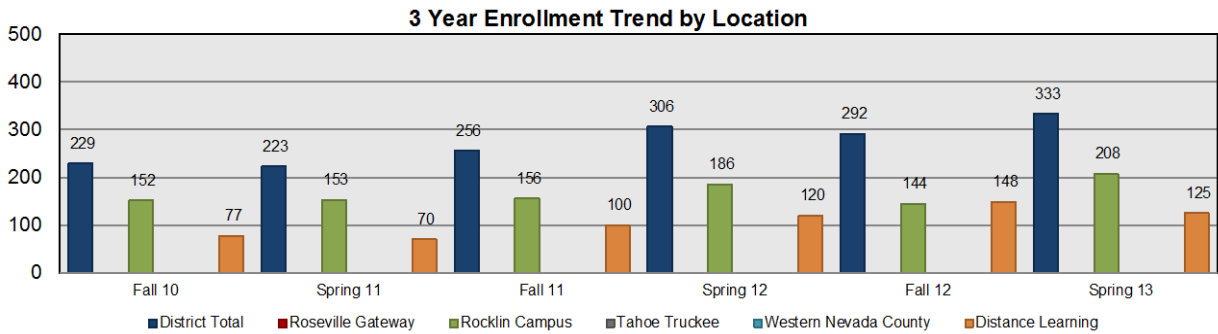
The agriculture department retention is currently at 84% for the three-year average from Fall 2010 to Spring 2013. The agriculture departmental success is at 70% for the same time period. By comparison the District average retention is 85% and the district success is at 71%.

Examining the data for just on ground course offerings for the same time period the retention levels for on ground courses are at 86% and success is at 73%. These data are the same as the District averages.

Viewing the data for just online offerings for the same three-year period, we find that the retention is at 87% and success is at 71%. These values are higher than the District averages. Our instructors have also taken courses in online teaching methodology as well as taught them.

3b) Enrollment Trends: Identify and explain the enrollment trends in your program's data.

Address separately the data for on ground, on-line, and enrollment at the various centers. Comment on the significance of the trends as well as the challenges experienced within the program. If you see a need to improve the statistical trends, outline a plan that will achieve the changes you are seeking. If applicable, comment on both the past performance and the future direction of the program as a whole as well as by location and mode of delivery. Please refer specifically to the data in your Department Statistics Report, as provided by the Research and Planning Office, in supplying your answer.

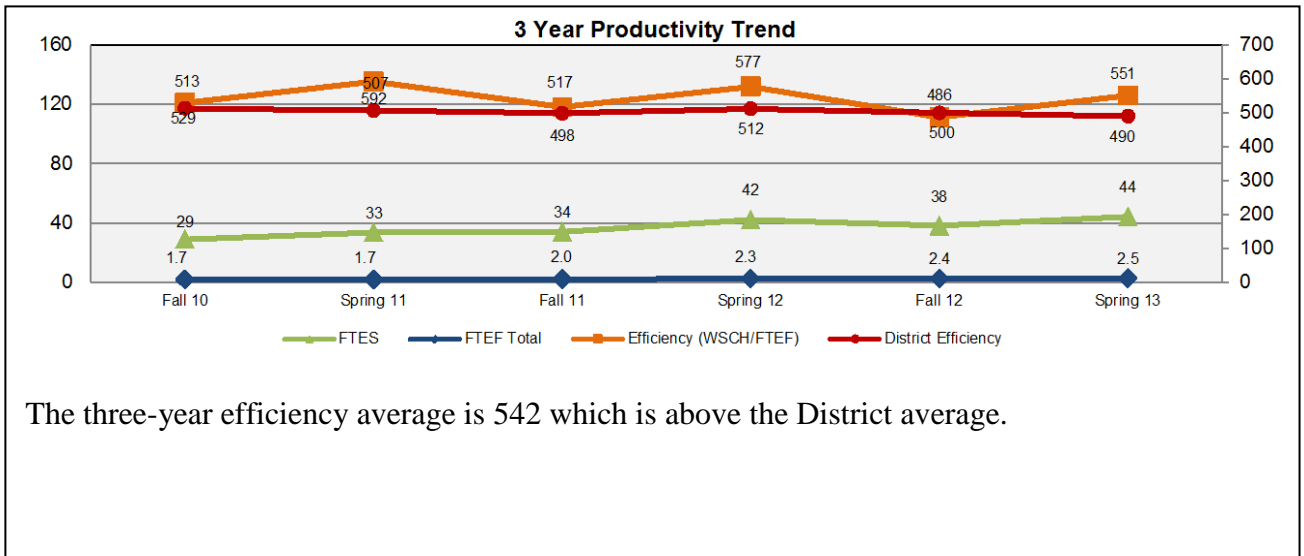


Online enrollment trend is steady over the past three semesters with on-ground course enrollments increasing. On-ground enrollments are increasing because we are offering more sections of courses meeting general education requirements. Currently we are limited to the number of online courses that can be offered due to only one faculty member that has an interest in teaching online. The department is currently investigating the possibility of offering hybrid courses taught by a part-time faculty member who is currently going through the training.

The lower enrollments of Fall 2010-11 were due to drastic program changes and uncertainty as the program was going through the Program Vitality process which scared majors away as they were not sure the program was going to remain.

There is a demand for courses. Course enrollment average over the past three years is 103%. Additional sections could be offered, particularly general education courses.

- 3c) Productivity: Comment on how the program contributes to overall district productivity. Comment on the significance of the trends as well as the challenges experienced within the program. If you believe the statistical trends need improvement, outline a plan that will achieve the changes you are seeking.



3d) Analysis and Planning: Referring to your ePAR Report of Goals, Strategies, Actions, and your assessment of SLOs, comment on how your program plans to maintain or increase its effectiveness and whether it has taken actions to do so.

SLO assessment will continue and all courses are on the three year cycle. Each semester the departmental faculty meet to discuss SLO's and assessments relating to them as well as make changes based on assessment results.

ePAR is attached.

3e) Optional Additional Data: Enter additional data here that you believe to be an indicator of your program's effectiveness and explain why.

You may add additional data here if desired:

4) Resources: This category assesses the adequacy of current resources available to the program and describes and justifies the resources required to achieve planning goals by relating program needs to the assessments above. (Refer to the bottom row of your DSR in your response to this category. You may include budget information if you have it.)

4a) Please describe the future direction and goals of your program for the next three years in terms of sustaining or improving program effectiveness, relevance, and currency. Please include any analysis of relevant assessment data noted above.

- Optimize current course offerings to improve enrollment and success – using data-driven results.
 - Alter the times of the courses to increase the student population and success rate.
 - Increase the number of course offerings to aid students to complete the program and meet the demand of general education students.
 - Write three new courses in the area of sustainable agriculture.
 - Continue to investigate course listings at other colleges/universities and offer additional new courses if research justifies.
- Propose and attempt to purchase new equipment for agriculture labs
 - Purchase new equipment to bring the current lab courses up to date.
 - Investigate new equipment that will improve the current lab courses.
- Pursue opportunities to enhance facilities.

4b) Equipment and Technology: Comment on the adequacy of the program’s equipment and technology funding level for the District as well as specific sites. Include a projection of equipment and technology needs for the next three years as well as a justification for needs.

The budget for the agriculture department has been reduced and never restored to the previously inadequate levels. We “get by” but could provide a much greater learning experience to students in laboratories if the funding levels for consumables was increased.

Projection can be found in attached ePAR.

4c) Staffing: Comment on the adequacy of your program’s faculty, classified, and student help staffing levels for the overall District as well as specific sites. Include a projection of staffing needs for the next three years and justification for any increases.

Currently there is one full-time faculty member, five part-time faculty, and a 50% classified position split with biology. The full time faculty member's background is in animal science and social implications of food production. There is a need for a full-time faculty member with a plant expertise to satisfy the demand for classes in that area. It is difficult to find part-time instructors with expertise. In addition, an additional full-time faculty member can share departmental duties making the workload much more reasonable than it is for one full-time faculty member. The classified staff member time is adequate with the current course offerings. Should the department continue to grow this position will need to be increased to 100%.

The department wishes to grow through adding more courses as well as offering additional sections of existing courses to meet student demand. This will be hard to achieve with the current staffing levels.

- 4d) Facilities: Comment on the program's fill rate and the adequacy of the facilities for the District as well as specific sites. Include a projection of facility needs for the next three years as well as a justification for any increases.

The only agriculture department facilities are the greenhouse on campus. The department is in dire need of additional outdoor learning areas. The animal science labs are currently offered at the Lincoln High School Farm, which is a wonderful partnership but requires students to drive to eighteen miles from the Rocklin campus (approximately a 30 minute drive).

The lab classroom is in terrible condition. The lab benches are on the outside of the room making it difficult to move around during labs. The sinks do not drain and there are no gas hookups. It is also used as a lecture room for agriculture, nutrition and biology making it impossible to prepare for labs. A prep room does not exist.

5) Summary/Closing

- 5a) Evaluate the program's strengths, weaknesses, opportunities, and challenges.

Strengths:

1. Quality instructors, both full time and part time. All instructors care about the students and the material presented during class.
2. Full-time and part-time faculty participated in shared-governance and professional development.
3. Supportive community and advisory committee.
4. Strong community involvement.
5. Outreach activities continuous (FFA Field Day, CTE Career Days, High School outreach)
6. Faculty who currently work in industry bringing industry currency to the class
7. Student-centered approach to learning.
8. A.S. and certificate degrees as well as a transfer core and general education courses
9. Demand for growth exists
10. Relevancy in alignment with district mission and strategic goals
11. Currency of offerings and faculty

Weaknesses:

1. Adequacy of staffing.
2. Adequacy of facilities.
3. Adequacy of funding: The agriculture department has been underfunded (equipment and consumable budget) for years.

Opportunities:

The agriculture program is currently in a position to grow through expanding the courses offered in sustainable agriculture meeting industry and food consumer demands.

Challenges:

The department wishes to grow through adding more courses as well as offering additional sections of existing courses to meet student demand. This will be hard to achieve with the current staffing levels and current budget for laboratory consumables. The lack of adequate facilities is ongoing and with the new Science Building not going to be built in the foreseeable future this

5b) Please provide any other information the Program Review Committee should consider that was not expressed in questions above.

The workload for a single full-time faculty CTE-affiliated department is staggering. Instructors should be paid or given release time when it comes to creating PR reports, CTE reporting and other extra activities required by the college that has come about as a consequence of accreditation review. It seems that more and more paperwork, reporting, meetings, etc. come up with every year that follows. The required level of activities unrelated to instruction, including reporting, is too much.

5c) How has the author of this report integrated the views and perspectives of those who have interests in the future of this program, e.g. full time and part time faculty, educational administrators, instructional assistants, classified staff, and students at Rocklin, Roseville Gateway, NCC and/or Tahoe Truckee?

The author is the single full-time faculty member for the agriculture department. The author has met with all interested parties, including, part-time faculty members, instructors in other departments, the Advisory Committee, the Placer Agriculture Commission and students in order to include their perspectives. Thus this program review and ePAR reflect a single voice that is the agriculture student body, faculty members, and community.