

Comprehensive Program Review Report



Program Review - Ornamental Horticulture

Program Summary

2022-2023

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What are the strengths of your area?: Some of the strengths of the Ornamental Horticulture Program are:

1. Curriculum implemented in the program has academic rigor with emphasis on practical industry standards. It meets the needs of the college student population including students wanting to complete a certificate to gain employment in the local industry, students wanting to complete an AS degree and transfer to a four year institution, and community members wanting to take courses for personal growth and development.
2. The program facilities are maintained to provide "hands-on training" to all students in the program. All courses in the program incorporate laboratory activities for students to apply the theory and concepts learned in lectures and class demonstrations to practical projects that engage students in learning through "project-based" instruction.
3. All courses in the program are part of a scheduling sequence that allows students to complete a certificate, or an AS Degree in four semesters or less. Some courses in the program meet general education requirements, and many courses meet the California Pest Control Adviser's (PCA) examination requirements. The scheduling course sequence is shared with the Counseling Division and staff members doing recruitment activities across the college district.
4. The program provides opportunities for students to participate in leadership development activities. Students have the opportunity to participate as judges, organizers, tabulators, timekeepers and group leaders for FFA sectional and regional activities hosted at the Tulare College Center, or at local high schools sponsoring FFA leadership events. Students have the opportunity to participate in activities and competitions sponsored by the Collegiate Agriculture Leaders organization. As members of the Ornamental Horticulture Club, students have the opportunity to serve the community by participating in community service activities.
5. A laboratory technician provides support to maintain and operate the program facilities. Facilities are maintained clean and safe for student learning throughout the year. The technician also provides support to maintain and prepare tools and equipment necessary for practical laboratory activities.

What improvements are needed?: The following areas of improvement have been identified in the program:

1. Increase student enrollment in the program. Enrollment in the program declined each academic year from 2019-2020 to 2021-2022. The average class enrollment during the 2021-2022 academic year was 12.4. That represents a 10.0% decrease from the previous academic year. The enrollment data for the Fall 2022 semester shows an increase of 20.0% from the Fall 2021 semester. These numbers reflect the enrollment from the "dual enrollment" classes at Exeter and Lindsay high schools. Classes in the program are now meeting face to face for lecture and lab instruction. student recruitment will be a focus of the program during the current academic year.
2. Acquisition of instructional tools and equipment to serve the areas of landscape management, nursery management, general horticulture, and floral technology. The need to maintain, update or replace tools and equipment to support the laboratory activities and meet the student learner outcomes in multiple courses continues. This program need requires prioritization to have a three-year replacement schedule for tools and equipment needed for instruction in all classes in the program. Having a

replacement schedule will allow for proper budgeting and use of district resources.

3. Add a drainage system inside the greenhouses and shade house. The greenhouses and shade house are a key component in the practical training of students. Those buildings were constructed without a drainage system. The lack of drainage causes the walkways in the buildings to become slippery and unsafe. The lack of drainage in these building adds a workload for faculty, lab technician, and students. A cleaning and sanitation schedule is currently maintained by faculty, lab technician, and students in order to keep walkways clean and safe for students and visitors.

4. Increase drainage on walkways around the OH unit facilities. Some of the walkways around the facilities get extremely wet and slippery during the fall and winter months. This is due to the lack of drainage. The wet surface on these walkways creates a safety issue for students, community visitors, faculty, and staff. The problem can be resolved by resurfacing the affected areas with material that allows for drainage of excess water during the wet months of the year.

Describe any external opportunities or challenges.: Some of the external opportunities for the Ornamental Horticulture Program include:

1. Potential to increase student outreach and recruitment from local area high schools. The high schools within district service area continue to maintain strong Agricultural Education programs. This presents an opportunity to recruit students from those programs. A dialog between college and high school representatives and stakeholders from the service area continues to explore the options of "dual enrollment" and "articulation" between college and high school courses. Currently, Lindsay High School and Exeter High School have "dual enrollment" agreements for courses in the program.

2. Potential to increase enrollment in the program by focusing student recruitment to courses that are part of the Plant Science for Transfer AS Degree (AS-T), and courses that meet the requirement to take the PCA exam. The enrollment in those courses has the potential to increase now that classes have returned to face-to-face instruction. Recruitment efforts are needed to promote courses to incoming students.

3. Potential to develop and offer Community Education classes through the Training Resource Center. These classes can provide an opportunity for individuals in the community to take "short term" classes to learn or improve specific horticulture skills. Topics for these classes may include: landscape irrigation maintenance and repair, lawn fertilization, planting trees and shrubs, pruning roses, etc.

4. Increase the exposure of the program to the community at large. The Horticulture Facilities have the potential to be utilized by community groups such as the Tulare County Master Gardeners, Community Horticulture Clubs, and other community groups and organizations interested in offering educational activities or workshops in a central location. The enclosure of the Horticulture Laboratory building during the Spring 2022 semester provides the opportunity to have evening classes and activities at the OH unit.

External challenges of the Horticulture Program include:

1. The ability to offer both day and evening classes to accommodate a larger student population. Many students taking courses to meet the requirements of the California PCA exam, or to complete a certificate prefer to take evening classes. Many of the horticulture classes meet the PCA exam requirement, however; it is difficult to schedule evening classes due to lack of available adjunct faculty.

Overall SLO Achievement: The student assessment data for the 2021-2022 academic year shows a success rate of 84.2 for the students completing classes in the Fall 2021 semester and a 100.0% success rate for students completing classes in the Spring 2021 semester.

The data shows that 14.6% of students dropped classes with a W in the Fall 2021 semester, and 9.4% of students dropped classes with a W in the Spring 2022 semester. The data shows an increase in success rate from the previous academic year. The success rate for 2021-2022 does not include students that withdrew from class with a W.

Changes Based on SLO Achievement: Student achievement shows that "Project Based" instruction is working for most students in the program. The following strategies are having a positive impact on student success: providing students with additional time to complete lab assignments, checking that students are progressing in the completion of written assignments by asking students to report on their progress on a weekly basis, referring students to the Student Success Center and the Writing Center,

providing student tutors with the academic background to help in all classes, and using rubrics for oral presentations, class projects and class assignments. The two changes to be implemented this year are 1). the addition of instructional time for students to learn the specialized software used for plant identification and the software used for landscape drafting; and 2). coaching students to use project and assignment score cards to plan and manage their work. The focus is to increase verbal and written communication skills.

Overall PLO Achievement: The overall PLO achievement rate for the Landscape Management and Ornamental Horticulture certificates and degrees continues to be above 80% for all PLO's. The assessment of the PLO's in the Landscape Design certificate shows a decline in student performance. Only 55.5% of the students met the outcome standard in two of the assessed outcomes. The data related to the Landscape Design certificate assessment shows that students need to access the computer equipment and software needed for the training more often. Poor attendance to lecture and poor participation in lab activities were factors that contributed to the reduction in student success in the Landscape Design certificate. Attendance and communication remain the primary challenges for students in the program.

Changes Based on PLO Achievement: The following changes are being implemented:

1). Additional time is taken to review project guidelines and scoring rubrics in all classes. 2). A presentation is done, in all classes, on how to access resources available on campus and online. 3). Student tutors are available to help students on an individual basis to complete projects and assignments. 4). The OH Lab Technician is available to help students access needed resources at the OH facilities to complete individual projects. 5). Students in OH 001 visit the library as part of the research project planning process. Students are encouraged to meet the instructors during office hours to review assignments, or seek individual help.

Outcome cycle evaluation: The outcome assessment cycle for all certificates and degrees has been updated.

Action: Student Recruitment

Increase recruitment efforts targeting students interested in the Ornamental Horticulture industry and related fields. Program faculty will collaborate with college staff dedicated to promote CTE programs or conduct outreach activities to increase the promotion of the OH Program and recruitment of students. This will be done by participating in college outreach activities, facilitating OH Unit tours requested by high school programs, and participating in other college activities related to student recruitment.

Leave Blank: New Action

Implementation Timeline: 2020 - 2021, 2021 - 2022, 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes: PLO- Identify and classify plant material, describe its usage, and cultural practices.

PLO- Prepare appropriate growth media for propagation techniques and growing container plant material.

PLO- Exhibit safe and appropriate practices for the use of equipment and tools in the landscape.

PLO- Exhibit appropriate installation and cultural care practices for an aesthetically pleasing landscape.

PLO- Communicate with the public and colleagues utilizing a variety of digital applications.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Chair, Agriculture Division Dean,

Rationale (With supporting data): A primary need of the Ornamental Horticulture Program is to increase student enrollment. The high schools within the service area of the district continue to maintain strong Agricultural Education programs. This presents an opportunity to recruit students from those programs. Efforts need to be placed on the to recruitment of students from all high schools within the college service area. In addition, recruitment efforts should also focus on the needs of reentry students in the surrounding communities.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Program Review - Ornamental Horticulture

Updates

Update Year: 2022 - 2023

09/16/2022

Status: Continue Action Next Year

The enrollment data from Fall 2022 shows a 20% increase in enrollment compared to Fall 2021. This increase might be an indicator that the recruitment efforts by staff and faculty are working. It could also be an indicator that students are ready to return to 100% face-to-face instruction. This action will continue into the next academic year.

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

Update Year: 2021-2022

10/07/2021

Status: Continue Action Next Year

The enrollment data from Fall 2020 and Fall 2021 shows an 8.4% reduction in enrollment per class from Fall 2020 to Fall 2021. It is not clear what factors are attributing to the reduction in enrollment per class. This action will continue into the next academic year.

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

Resources Description

Facilities - Time from staff and faculty to meet and develop goals and a plan for the year. In addition, staff and faculty time and facilities are needed to meet and plan, coordinate and implement recruitment and outreach activities. (Active)

Why is this resource required for this action?: this resource is needed to promote the Ornamental Horticulture Program and increase student enrollment.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 3000

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 2.3 - By 2021, increase the percentage of students who complete transfer-level English by 15 percentage points and transfer-level math by 10 percentage point with their first year.

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

District Objective 4.2 - Improve organizational effectiveness by strengthening operations of and communication between District departments, divisions, and constituents

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 - 2.2 - 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.

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

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

District Objective 4.1 - Increase the effective use of data and transparency in decision making at all institutional levels from 2021-2025.

District Objective 4.2 - Improve communication practices needed to support organizational effectiveness and continuous improvement across all District units and constituents from 2021-2025.

Action: Program and Course Outcomes

Increase effectiveness of the assessment of program and courses outcomes to make changes to course curriculum and teaching modalities to improve student success. Review all program and course outcomes. Modify program and course outcomes as needed. develop and implement an assessment plan for all program and course outcomes.

Leave Blank:

Implementation Timeline: 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes: All program outcomes and all course outcomes part pf the Ornamental Horticulture Program will be reviewed.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Chair

Rationale (With supporting data): This action is needed to make necessary changes to curriculum and teaching modalities to improve student success based on assessment results.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

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 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

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District Objective 4.2 - Improve organizational effectiveness by strengthening operations of and communication between District departments, divisions, and constituents

Action: Shade Cloth Frame

Provide students in the program practical training and experience in growing a diversity of plant material using industry standards.

Leave Blank:

Implementation Timeline: 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes: OH 204- Given a set of plants and an area in the nursery, students will be able to prepare a sales demonstration for the public. Students will be evaluated on their ability to select and prepare plant material for sale including plant selection, labeling, pricing, and presentation. Minimum of 90% of the plants selected by students must be of market quality and size based on industry standards.

OH 204- Given a set of 20 plants, students will be able to weed, fertilize and water all plants. Student will perform the skills to industry standards and satisfaction of the instructor.

OH 204- Given a set of ten one-gallon container plants, students will be able to trim or prune, label, and space the plants in the nursery to industry standards.

OH 2- Given 50 plants or plant samples, students will be able to identify those plants with 70% accuracy.

OH 105- Given a set of stock plants and all materials, students will be able to harvest propagation material and make 25 semi-hardwood cuttings to industry standards.

Person(s) Responsible (Name and Position): Program faculty and staff

Rationale (With supporting data): The available space to grow plant material that is sensitive to full sun exposure is limited. The limited space in the Shadehouse is used to maintain and acclimate small plant material. Space under shade is needed to grow shade plant species used in lab activities in various classes.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Resources Description

Facilities - 20' X 40' Frame and Shade Cloth to cover plants growing in several nursery growing areas. (Active)

Why is this resource required for this action?: This resource is needed train students to meet course and program standards requiring practical skills in growing, managing and identifying plant species requiring shade exposure.

Notes (optional): Funding for this resource has been allocated (Perkins Funding).

Cost of Request (Nothing will be funded over the amount listed.): 5900

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

District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices

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and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

Action: Nursery Management Laptop Upgrade

Provide students in the nursery management program practical experience in the use of the specialized hardware and software used by industry in Nursery Management.

Leave Blank:

Implementation Timeline: 2022 - 2023

Leave Blank: 05/31/2023

Leave Blank:

Identify related course/program outcomes: PLO- Communicate with the public and colleagues utilizing a variety of digital applications.

OH 204 SLO- Given a set of plants and an area in the nursery, students will be able to prepare a sales demonstration for the public. Students will be evaluated on their ability to select and prepare plant material for sale including plant selection, labeling, pricing, and presentation. Minimum of 90% of the plants selected by students must be of market quality and size based on industry standards.

OH 3 SLO- Given 50 plants or plant samples, students will be able to identify and label those plants with 70% accuracy.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Chair, Agriculture Division Dean

Rationale (With supporting data): The the hard drive on laptop used to manage the printing of plant labels for lab activities, and manage lessons for plant identification was damaged during the 2021-2022 academic year. The laptop was replaced with a laptop of limited capacity to run the required software. The replacement laptop has a small screen and it's slow in processing the tasks to be completed.

This resource is needed to maintain the training of students relevant to the current industry standards. Specialized software is in place for the training of students. This action is needed to allow students and faculty to continue practicing the skills required by industry.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022

10/06/2021

Status: Continue Action Next Year

One laptop was replaced at the end of Summer 2021. The new laptop has the specialized software needed to prepare and conduct lessons and lab activities in all classes of the program. This laptop will be used for instruction.

The laptop that manages the greenhouse controllers and the laptop that is used to print nursery labels need to be updated or replaced. The software that is used to manage the greenhouse systems also needs to be upgraded.

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

Resources Description

Technology - Laptop with 17" screen (Active)

Why is this resource required for this action?: The laptop is used to access specialized software to conduct lessons and lab activities in the following classes: OH 107- Landscape Design, OH 218- Xeriscape: Water Conservation, OH 2- Plant Identification 1, OH 3- Plant Identification 2, OH 1- Introduction to Horticultural Science, OH 109- Landscape Maintenance, OH 105- Plant Propagation, and OH 204- Nursery and Greenhouse Production. The current laptop is working slow due to limited capacity.

Notes (optional):

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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 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
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: 2021-2025
District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.
District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.
District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.
District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.
District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.
District Objective 4.1 - Increase the effective use of data and transparency in decision making at all institutional levels from 2021-2025.

Action: Tools and Equipment

Provide students with proper training in the operation and safety of tools and equipment based on current industry standards in landscape maintenance and management, nursery production and management, and the floral design industry.

Leave Blank: Continued Action

Implementation Timeline: 2020 - 2021, 2021 - 2022, 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes: OH 109- Given an area of turfgrass, students will be able to edge and mow the turf to the specifications called by each grass type as discussed in class.

OH 220- Given a pesticide sprayer and personal protective equipment, students will be able to calibrate the sprayer to treat a given area to the instructor's satisfaction.

OH 208- Students will demonstrate proficiency in the safe operation of landscape tools and equipment based on a practical exam to the instructor's satisfaction.

OH 222- Given a landscape area, students will be able to monitor the area for pests and beneficials and complete a pest monitoring form with 90% accuracy or to the instructor's satisfaction.

OH 1- Given all soil components, students will be able to measure components and mix 3 types of organic soil mixes used to

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propagate or grow plants in containers to industry standards.

OH 210- Given a fertilizer spreader and a bag of fertilizer, students will be able to calibrate the spreader and apply the fertilizer to a given turf area to the instructor's satisfaction, based on the spreader's standard recommendations, and the fertilizer label recommendations.

OH 111- Given cut floral materials, students will be able to design and construct floral designs that are representative of round, western line, vase, and wear and carry principles to a level that is industry standard.

PLO- Exhibit safe and appropriate practices in the use of equipment and tools in the landscape.

PLO- Describe and demonstrate the safe and efficient use of tools, equipment and materials commonly used in ornamental horticulture and nursery management.

PLO- Prepare appropriate growth media and utilize common horticultural techniques and practices to propagate and produce ornamental plants in containers.

PLO- Identify and classify common landscape plants utilized in the climate zones of the Central Valley, and describe their cultural requirements.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Dean, Agriculture Division Chair

Rationale (With supporting data): The Ornamental Horticulture facilities at the Tulare College Center were designed with input from members of the horticulture industry. The facilities allow for the practical hands-on training of students in the program based on current industry standards and needs. Equipment and tools are needed to provide practical training to students based on current industry requirements.

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022

10/09/2021

Status: Continue Action Next Year

Tools and equipment continue to be replaced or added to the program based on available funding.

The following tools and equipment were purchased during the 2020-2021 academic year: pH meters, infrared thermometers, propagation trays, and stack boxes and bins for soil mixing and transplanting. The pH meters and thermometers are used in lab activities related to OH 001, OH 204, OH 109, OH 210 and OH 105. The propagation trays, stack boxes and bins are used in all classes that have a propagation or transplanting lab component. A set of pruning ladders were purchased to train students to prune landscape trees. These ladders are used in the Landscape Management program.

During the 2021-2022 academic year, the following pieces of equipment are scheduled to be purchased: Petra HD 5000 battery operated sprayers and a masonry saw. These pieces of equipment will be used to train students in classes with a component in landscape pest management, or landscape installation and construction.

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

Resources Description

Equipment - Instructional - DRAMM Chemdose 20 or similar applicator (Active)

Why is this resource required for this action?: This resource is needed to provide equipment to train students to meet course and program standards requiring practical skills in fertilizer applications and equipment calibration.

Notes (optional): This resource will be funded with VTEA funds.

Cost of Request (Nothing will be funded over the amount listed.): 3100

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Equipment - Instructional - PRO-35 Fertilizer Applicator or similar equipment (Active)

Why is this resource required for this action?: This resource is needed train students to meet course and program standards requiring practical skills in fertilizer application and equipment calibration.

Notes (optional): VTEA funds have been allocated for this resource.

Cost of Request (Nothing will be funded over the amount listed.): 1300

Equipment - Instructional - Three 36 inch soil sampling probes with side step. (Active)

Why is this resource required for this action?: The probes are needed to provide equipment to train students to collect soil samples based on industry standards. These probes will be replacement probes.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 750

Equipment - Instructional - 2-1/4" X 3' Soil Auger Kit (x) 6 (Active)

Why is this resource required for this action?: This resource is needed to train students to take soil samples using industry standard procedures. The number of soil sampling augers available to the program is limited. Augers are needed to conduct a soil sampling lab with with an entire class.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 5500

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

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

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.

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District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: California Pest Control Advisers Exam Requirements

Provide students with a complete, current list of courses that meet the requirements for the California Pest Control Advisers examination.

Leave Blank:

Implementation Timeline: 2019 - 2020, 2021 - 2022, 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes: District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points.

Person(s) Responsible (Name and Position): Agriculture Division Faculty, Agriculture Division Chair, Agriculture Division Dean

Rationale (With supporting data): The number of students taking classes to meet the requirements to take the state exam to become a California Pest Control Adviser continues to remain constant based on current enrollment data. Students taking agriculture courses to meet the state requirements for the PCA examination do not have access to a complete list of courses in the Agriculture Division that clearly identifies all courses that qualify for the PCA licensing examination. Creating a current list of courses and making the list available to students will allow students to schedule courses based on the specific needs. It will also allow counselors to better guide students through the requirements of the PCA examination.

Priority: Medium

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: The state of California requires that students take a specific number of units in various categories to qualify to take the state exam to become a licensed pest control adviser. When students are not able to schedule classes due to lack of information, it prolongs the time that it takes for students to meet the state requirements.

Update on Action

Updates

Update Year: 2022 - 2023

10/01/2022

Status: Continue Action Next Year

Courses in the program that meet the requirements for the California Pest Control Advisers examination have been reviewed. A list with those courses will be created and shared with the counseling division. The list will also be made available to students. Courses on the list will also be provided to the California Department of Pesticide Regulation to be included on the website.

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

Update Year: 2021-2022

10/09/2021

Status: Continue Action Next Year

This action was not addressed during the previous academic year due to time restrictions. It will continue through 2021-2022.

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

Resources Description

Personnel - Faculty - Time for faculty in the Agriculture Division to review the California Pest Control Advisers (PCA) examination requirements and create a list of all courses in the division that meet the requirements of the state. (Active)

Why is this resource required for this action?: This resource is needed to provide faculty the time to prepare a list of courses that meet the state requirements for the PCA examination. The list will become available to students in order that

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they properly schedule required courses. In addition, the list will become available to counselors to be used as a guidance tool with those students seeking information on PCA examination requirements.

Notes (optional):

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

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 2.4 - 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
District Objective 4.2 - Improve organizational effectiveness by strengthening operations of and communication between District departments, divisions, and constituents
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: 2021-2025
District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.
District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.
District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.
District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.
District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.
District Objective 4.1 - Increase the effective use of data and transparency in decision making at all institutional levels from 2021-2025.
District Objective 4.2 - Improve communication practices needed to support organizational effectiveness and continuous improvement across all District units and constituents from 2021-2025.

Action: Irrigation Systems

Provide students with the training in operating and maintaining automatic irrigation systems in a nursery setting, and provide automatic watering systems for the operation and management of nursery plant material used for practical laboratory activities.

Leave Blank: Continued Action

Implementation Timeline: 2019 - 2020, 2020 - 2021, 2021 - 2022

Leave Blank:

Leave Blank:

Identify related course/program outcomes: OH 204- Given a set of plants and an area in the nursery, students will be able to prepare a sales demonstration for the public. Students will be evaluated on their ability to select and prepare plant material for sale including plant selection, labeling, pricing, and presentation. Minimum of 90% of the plants selected by students must be of market quality and size based on industry standards.

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OH 204- Given a set of 20 plants, students will be able to weed, fertilize and water all plants. Student will perform the skills to industry standards and satisfaction of the instructor.

OH 204- Given a set of ten one-gallon container plants, students will be able to trim or prune, label, and space the plants in the nursery to industry standards.

OH 2- Given 50 plants or plant samples, students will be able to identify those plants with 70% accuracy.

OH 105- Given a set of stock plants and all materials, students will be able to harvest propagation material and make 25 semi-hardwood cuttings to industry standards.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Chair, Agriculture Division Dean

Rationale (With supporting data): The irrigation systems originally installed in the greenhouses, shade house and nursery growing areas do not work properly. During the past year, some of the systems have been modified to make necessary corrections. Modified systems are now working as intended in the original design. The irrigation systems are needed to properly train students in the operation and maintenance of irrigation technology, and to maintain the health of the plant material used for instructional purposes.

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2022 - 2023

09/30/2022

Status: Continue Action Next Year

The irrigation systems for the Annuals greenhouse will be redesigned and a new system will be installed during the current academic year.

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

Update Year: 2021-2022

10/09/2021

Status: Continue Action Next Year

An irrigation system needs to be installed in the Sales Area of the OH Unit and the Annuals greenhouse to meet student learner outcomes and program objectives. The plan is to use VTEA funding to continue with this action.

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

Resources Description

Facilities - Irrigation systems for nursery growing areas, greenhouses and shade house that are part of the instructional OH Unit. (Active)

Why is this resource required for this action?: The irrigation systems are needed to train students in the operation and maintenance of irrigation technology, and to maintain the health of the plant material used for instructional laboratory activities.

Notes (optional): Multiple irrigation zones have been modified to meet the needs of the operation of the nursery and the proper training of students in the program. Zones 3-7 and 10-12 are fully operational. The irrigation systems in the Propagation Greenhouse have been updated and are fully functional. The irrigation systems in the Annuals Greenhouse and Shade-house have been adjusted to accommodate instructional needs. Additional irrigation zones in the nursery and systems in the other greenhouses need to be modified.

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

Equipment - Instructional - Materials and supplies to install an irrigation system on the Sales Area of the Horticulture Unit and add micro-irrigation to the Annuals greenhouse. (Active)

Program Review - Ornamental Horticulture

Why is this resource required for this action?: This resource is needed to provide the irrigation systems to train students to meet course and program standards requiring practical skills in plant production and management. Irrigation systems will also be used to train students in the operation, management and maintenance of micro-irrigation systems.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 2000

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

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

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: Drainage Systems

Provide safe facilities for the implementation of the practical lab activities of the program.

Leave Blank: Continued Action

Implementation Timeline: 2020 - 2021, 2021 - 2022, 2022 - 2023

Leave Blank:

Program Review - Ornamental Horticulture

Leave Blank:

Identify related course/program outcomes: OH 105- Given a set of stock plants and all materials, students will be able to harvest propagation material and make 25 semi-hardwood cuttings to industry standards.

OH 1- Given all materials, students will be able to demonstrate 3 vegetative and seed propagation techniques utilized to propagate common ornamental plants to industry standards.

OH 105- Given stock plants and all materials, students will be able to make 25 herbaceous cuttings with 90% success rate.

OH 1- Given a set of guidelines, students will be able to conduct research experiment and write a report and present their findings to the class with a minimum score of 70% on a rubric.

OH 204- Given a set of plants and an area in the nursery, students will be able to prepare a sales demonstration for the public. Students will be evaluated on their ability to select and prepare plant material for sale including plant selection, labeling, pricing, and presentation. Minimum of 90% of the plants selected by students must be of market quality and size based on industry standards.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Dean, Dean of Facilities, Agriculture Division Chair

Rationale (With supporting data): The greenhouses and shade house are a key component in the practical training of students. Those buildings were constructed without drainage. The lack of drainage causes the walkways to become slippery and unsafe. Drainage is needed in those building to minimize safety hazards. Drainage has been installed in multiple locations within the nursery Blocks to minimize standing water on walkways. The walkways around Blocks 3-7 need resurfacing to improve drainage.

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2022 - 2023

09/30/2022

Status: Continue Action Next Year

The need to address the lack of drainage on parts of the OH Unit continues. Emphasis needs to be placed on areas where the nursery and greenhouse walkways become slippery creating a safety hazard. When walkways become slippery, it limits access to areas of the nursery by students, staff and faculty. The goal is to identify problematic areas and provide solution as soon as possible.

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

Update Year: 2021-2022

10/09/2021

Status: Continue Action Next Year

The need to address the drainage systems at the OH Unit continues. Emphasis needs to be placed on areas where the nursery walkways become a safety issue.

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

Resources Description

Facilities - Addition of drainage system to Greenhouses and Shadehouse. Resurface nursery walkways around Blocks 3-7. (Active)

Why is this resource required for this action?: The greenhouses and shade house are a key component in the practical training of students. Those buildings were constructed without drainage. The lack of drainage causes the walkways to become slippery and unsafe. Drainage is needed in those building to eliminate the safety hazard. Drainage on nursery walkways needs to improve to minimize safety hazards.

Program Review - Ornamental Horticulture

Notes (optional): Nursery walkways can be resurfaced with gravel.

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

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

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 - 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.

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: Equipment Maintenance and Repair

Provide safe instructional equipment to conduct practical laboratory activities to train students in the program based on current industry standards.

Leave Blank:

Implementation Timeline: 2019 - 2020, 2021 - 2022

Leave Blank: 04/15/2020

Leave Blank:

Identify related course/program outcomes: OH 109- Given an area of turfgrass, students will be able to edge and mow the turf to the specifications called by each grass type as discussed in class.

OH 1- Given all soil components, students will be able to measure components and mix 3 types of organic soil mixes used to propagate or grow plants in containers to industry standards.

OH 210- Given a fertilizer spreader and a bag of fertilizer, students will be able to calibrate the spreader and apply the fertilizer

Program Review - Ornamental Horticulture

to a given turf area to the instructor's satisfaction, based on the spreader's standard recommendations, and the fertilizer label recommendations.

PLO- Exhibit safe and appropriate practices in the use of equipment and tools in the landscape.

Person(s) Responsible (Name and Position): Program Faculty, Agriculture Division Chair, Agriculture Division Dean

Rationale (With supporting data): Currently, the OH Program has a working budget, but the budget does not clearly identify the necessary funds to maintain, repair, or replace equipment in the program.

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation: Equipment used to conduct practical training laboratory activities in all courses of the program needs to be maintained in proper working condition to provide safe training to students.

Update on Action

Updates

Update Year: 2022 - 2023

09/30/2022

Status: Continue Action Next Year

Funding was allocated for the repair and maintenance of equipment with a small engine. Maintenance and repairs on most equipment in the program was done during the 2021-2022 academic year. Some equipment with a 2-cycle engine needs to be serviced. Equipment needing service will be identified and serviced before it's used for class instruction.

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

Update Year: 2021-2022

10/09/2021

Status: Continue Action Next Year

This action was not address during the previous academic year due to time limitations.

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

Resources Description

Personnel - Faculty - Time for faculty to evaluate equipment maintenance, repair and replacement needs in order to develop a three year plan with estimated costs to maintain, repair, or replace the equipment in the program. (Active)

Why is this resource required for this action?: This resource is needed to properly develop a working budget that accurate reflects the total expenses of the program and maximize the use of district resources.

Notes (optional):

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

Adjustment to Base Budget - Funding to do required maintenance, and needed repairs on turf management and landscape management equipment. (Active)

Why is this resource required for this action?: This resource is needed to provide safe equipment for the training and assessment of students in the program. The equipment used in the training of students requires regular maintenance to keep the equipment safe for operation. When equipment needs repairs, the repairs must be done before the equipment is used for student training. The OH Program does not have a set budget for maintenance and repairs.

Notes (optional):

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

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

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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
District Objective 4.2 - Improve organizational effectiveness by strengthening operations of and communication between District departments, divisions, and constituents
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: 2021-2025
District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.
District Objective 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% from 2021-2025.
District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.
District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.
District Objective 4.1 - Increase the effective use of data and transparency in decision making at all institutional levels from 2021-2025.
District Objective 4.2 - Improve communication practices needed to support organizational effectiveness and continuous improvement across all District units and constituents from 2021-2025.

Action: Arthropod Collections

Provide students in the program with the knowledge and practical experience to identify, manage and control arthropod pests and beneficial insects found in the management of landscapes and nurseries.

Leave Blank:

Implementation Timeline: 2021 - 2022

Leave Blank:

Leave Blank:

Identify related course/program outcomes: SLO, OH 210- Given five samples of insect pests and five samples of weeds, students will be able to identify the samples with a minimum of 80% accuracy.

SLO, OH 222- Given a landscape area, students will be able to monitor the area for pests and beneficials and complete a pest monitoring form with 90% accuracy or to the instructor's satisfaction.

SLO, OH 222- Given a landscape project scenario, students will be able to identify and recommend cultural practices that will reduce or eliminate the incidence of pests in the given area to the instructor's satisfaction based on industry standards.

SLO, OH 222- Given 20 common arthropods (pests and beneficials), students will be able to identify them by common name with 80% accuracy.

PLO- Exhibit appropriate installation and cultural management practices for an aesthetically pleasing landscape.

Person(s) Responsible (Name and Position): Program Faculty

Rationale (With supporting data):

Priority: Medium

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

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Update on Action

Updates

Update Year: 2022 - 2023

09/16/2022

Status: Action Completed

This action has been completed.

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

Resources Description

Equipment - Instructional - Materials and equipment to prepare arthropod collections to include arthropod exhibit cases, insect pinning blocks and arthropod killing jars. (Active)

Why is this resource required for this action?: The collections are used to train students to identify key pests and beneficial insects in the production of nursery plant material and management of plants in the landscape. The collections are used to conduct the assessment of SLO's in courses that are part of the Landscape Management program, and to prepare students to take the California Pest Control Advisors exam.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 3000

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

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

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District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.