

Comprehensive Instructional Program Review Self-Study

OVERVIEW OF PROGRAM REVIEW

The Comprehensive Instructional Program Review Self-Study (CIPR), conducted every six years, is a structured opportunity to gather, analyze, and reflect on data related to individual programs or program groupings within Academic Clusters or Areas of Study. The primary purpose of the CIPR is to support continuous improvement by evaluating the overall health of a program and identifying meaningful, actionable recommendations.

In the years between CIPRs, departments engage in Annual Planning, which informs and is summarized within the Self-Study. This process aligns with the College's five-year planning model, ensuring that short-term goals and long-term strategies are integrated.

At the conclusion of each CIPR cycle, the final report is posted to the Program Review Committee (PRC) webpage and shared with the College Council. All instructional programs, whether standalone or part of a defined grouping, are required to participate. Career and Technical Education (CTE) programs with separate accreditation processes may coordinate with their dean to streamline overlapping requirements. Additionally, biennial CTE Mini-Reviews are incorporated into the CIPR.

The PRC acknowledges that the CIPR is a more in-depth and time-intensive process than the previous two-year reviews. We deeply appreciate the contributions of all faculty and staff involved, especially those serving on the Gold, Silver, and Green Teams, who help ensure each report is thorough and meaningful. Thank you for your dedication to this important work!

HOW ARE PROGRAMS SELECTED FOR REVIEW

The PRC maintains a master schedule of all programs, Academic Clusters, and Areas of Study, including a multi-year forecast of planned review cycles. Each year, the committee collaborates with Division Deans to update this schedule and determine which programs will participate in the upcoming cycle. Teams are formed in early fall, and timelines for the year-long review process are distributed.

Each fall, Comprehensive Program Review Evaluation Teams are assembled and include:

- **Gold Team** – Writing Team
- **Silver Team** – Draft Review Team
- **Green Team** – Final Evaluation Team

Important timelines and resources are available on the *Planning Support Canvas* page and in the *Program Review Handbook*, which is posted on the PRC webpage.

ABOUT THIS SELF-STUDY

Before starting your current CIPR, you will complete a brief reflection on outcomes from prior planning efforts. The CIPR is organized into five required sections, varying in depth. We recommend reviewing all sections in advance to understand the scope and how each part connects. Notably, each section's analysis should inform and lead into Section 5 (Summary and Future Plans), which synthesizes your findings and outlines future goals.

The five sections are:

1. Mission and Learning Outcomes
2. Instructional Practices
3. Program Data Analysis
4. Curriculum
5. Summary and Future Plans

Program(s) Under Review

DRAFT submission and date: 10 November 2025

FINAL submission and date: *Click or tap here to enter text.*

Check the option that applies to this CIPR:

This Self-Study considers a single degree or certificate.
Enter the name of the degree or certificate:
Click or tap here to enter text.

This Self-Study considers multiple degrees and/or certificates organized by
Areas of Study or Academic Cluster.
List Name of Areas of Study or Academic Cluster:
Biological Sciences

List each degree or certificate associated with the Areas of Study or Academic Cluster:
AA1511 - Allied Health
AS1605 - Health Sciences
AA1507 - Biological Sciences

Please note: *In some sections of the Self-Study it may be appropriate to report on individual program outcomes rather than academic cluster outcomes, such as PLOs that are distinct vs shared.*

Background Information

PRIOR PROGRAM REVIEW and ANNUAL (formerly Area Plan) PLAN REFLECTION

Last Program Review Term and Year: *see below*

1. Revisit the goals from your *last* program review and annual plans. Briefly identify which goals have been achieved, which are in progress, and what evidence demonstrates impact? List any resources your program received to support student learning improvements.

AA1511 – Allied Health: Fall 2020

In the previous program review, one identified goal was to map SLO's to ISLO's for the core classes of Anatomy, Physiology, Microbiology, and Chemistry. This goal is ongoing and has not yet been achieved. We plan to use current SLO's to generate PLOs and assure they map to ISLOs. A second goal was to disaggregate the data for these classes to isolate Allied Health Majors and work toward increasing success and retention rates as appropriate. We will continue toward this goal in the current program review.

AS1605 – Health Sciences: New Program

This program is new and does not yet have data or goals.

AA1507 – Biological Science: Fall 2016

The Program Review Committee recommended considering developing an AS-T (Associates Transfer) degree. The Biological Science faculty are still considering developing an AS-T – Biology degree program, however the number of potential degree earners may be limited.

(CTE programs may wish to include references to any external accrediting or regulatory agencies).

N/A

Current Comprehensive Instructional Program Review

We engage in this process with the ultimate goals of enhancing program effectiveness and advancing student success and achievement. Completing the Comprehensive Instructional Program Review should be a collaborative effort, involving input from a broad range of stakeholders. Additional guidance on team roles and responsibilities is available in the *Comprehensive Instructional Program Review Handbook* and on the *Planning Support Canvas* page.

Year of Current Review: 2026

List Gold Team Member(s): Rebecca Osborne & Morgan Hannaford

List Silver Team Captain: Carrie Rosensteel

List Green Team Captain: Stacey Bartlett

1. MISSION AND LEARNING OUTCOMES

1. *Alignment with Mission: Describe how the program contributes to the [Shasta College mission](#). Include discussion of some of the program's successes and benefits to the students and/or community (ACCJC Eligibility Requirement 6, Accreditation Standard 1.1, 1.5, 2.9).*

The AA1511 Allied Health program at Shasta College provides lower division major courses needed for students to transfer to a university and earn a bachelor's degree in nursing or in other allied health fields. The courses offered, Anatomy, Physiology, and Microbiology, are fully aligned with both the University of California and California State University systems: Cal-GETC and IGETC. This program can also provide a pathway to career-oriented programs, such as nursing and dental hygiene, address local workforce needs in health care and prepare students for active engagement in their communities.

The AA1507 Biological Sciences program provides foundational coursework needed for students intending to transfer to a university to earn a bachelor's degree in Biological Science fields. These courses, Principles of Biology, General Botany, and General Zoology, are fully aligned with both the University of California and California State University systems: Cal-GETC and IGETC. This program fosters scientific literacy and transfer pathways into fields contributing to regional growth. As a community college, Shasta College offers these courses at a relatively low cost with high instructor-to-student ratios that greatly increase current student success and once they transfer to university or a professional program. Students have mentioned how well these programs have prepared them for four-year universities, such as UC Davis and Cal Poly Humboldt, and instructors in nursing programs have noted how well-prepared Shasta College students are in their courses.

Faculty members in these programs have been involved with community outreach by volunteering at academic events such as the Redding Regional Science Bowl, hosting local elementary and high school students in science labs, visiting local schools to provide hands-on presentations on science topics, and presenting at the local AAUW Redding Women in STEM Conference and at local chapter California Native Plant Society meetings. Faculty members have also assisted community members with species identification and have organized local and international science field excursions. This faculty involvement provides a positive reflection on the dedication of the college to the community and helps make science more accessible to the community.

2. *Describe any current or recent challenges that might hinder students in the program from reaching their goals.*

The primary challenge during the last six years has been the COVID-19 pandemic, which forced all courses online. Unfortunately, this affected science courses significantly as science is such a "hands-on" experience, and the in-person laboratory experience (in particular) was missing during the pandemic years. Virtual lab experiments are not a replacement for the real laboratory experience, so since the end of the pandemic, labs are now taught only in-person. However, many lecture sections are still taught online, as is the case for Anatomy, Physiology, and

Microbiology. Offering courses only in a hybrid format, with labs in-person and lectures only online, may hinder the success of students who learn better in-person. To address this, we are maintaining a strong hybrid offering to benefit students with tight schedules while prioritizing fully in-person options for specific courses, such as Microbiology and Botany, where feasible. According to institutional statistics, the student success rates for the Allied Health program are lower than those of the college and the Biological Sciences program. These programs include rigorous, high-unit courses, and students often enter them underprepared for the necessary study skills. To support these students, the department is implementing evidence-based interventions, including the use of Supplemental Instruction (SI) to provide academic support directly within the course context. Additionally, some faculty are adopting alternative evaluation methods, such as a multiple-assessment strategy in place of high-stakes exams, to reduce anxiety and provide more frequent feedback.

These strategies aim to better prepare students for the demands of the curriculum and improve retention. Institutional statistics also indicate that both programs include higher percentages of lower-income students compared to the overall Shasta College average. These students often face significant academic challenges as they must balance work with school and family, adding to mental and emotional strain and time management issues. A primary obstacle for this demographic is scheduling, as offering these courses during the day only creates conflicts for students who must work during traditional business hours. While we recognize that offering true evening options would better accommodate the diverse needs of our working student population and improve equitable access, implementing these sections remains a significant challenge due to current staffing and resource limitations.

3. List each [PLO](#) and write a brief narrative summary analysis discussing outcomes for each of them. If not assessing PLO's at the time of this report writing, list each PLO and attach your plan and timeline to complete assessments (Accreditation Standard 2.2, 2.9):
 - *Assessment results should include overall success rate on assessment, and as appropriate, provide outcomes achievement data by mode of delivery by courses. Multiple years of data should be used when available.*

PLO's for AA1511 Allied Health and AA1507 Biological Sciences are being developed in alignment with existing SLO's currently used the core courses. The proposed PLO's for AA1511 Allied Health are: 1) Effectively communicate scientific concepts using correct application of appropriate terminology to diverse scientific and non-scientific audiences through written, oral, and/or visual methods. 2) Discuss pathophysiological concepts to categorize principles related to anatomy, physiology, and microbiology to describe the mechanisms of human diseases. The proposed PLO's for AA1507 Biological Sciences are: 1) Implement the scientific method to analyze a question and draw evidence-based conclusions; and 2) Use a compound microscope to observe and measure cells with an ocular micrometer. These PLO's will be assessed for future CIPR cycles. For example, PLO 1 will be assessed using a shared rubric applied to a lab investigation or data-analysis assignment in BIOL1 (and/or BOT1/ZOOL1 where appropriate). Results will guide improvements to experimental design instruction, data interpretation practice, and feedback cycles.

PLO's for AS1605 Health Sciences are established and will be reviewed with the next CIPR cycle. AS1605 Health Sciences PLO's are as follows: 1) Examine principles of human anatomical and pathophysiological systems to describe the maintenance of homeostasis at the cellular and systemic level; 2) Analyze and apply data as it relates to physiological and diagnostic applications; 3) Discuss pathophysiological concepts to categorize principles related to anatomy, physiology, and microbiology to describe the mechanisms of human diseases; 4) Compare and contrast allied healthcare roles similar to nursing, nutrition, physical therapy, and dental hygiene; and 4) Apply knowledge of evidence-based concepts related to evolving scientific and social issues that affect contemporary healthcare systems. Course SLO's will likely be modified to align with the adoption of common course numbering CCN standards

2. INSTRUCTIONAL PRACTICES

1. *In this section, work on deliberative discussions with varied stakeholders and partners. Describe how your program promotes students' sense of belonging, connection, and engagement? (examples: outside learning experiences, project celebrations, and clubs) (Accreditation Standard 2.8)*

The Life Sciences program promotes student belonging and engagement by cultivating a culture of “high expectations and high support.” We recognize that success in rigorous courses like Anatomy, Physiology, and Microbiology requires more than just content delivery; it requires the intentional construction of a scholarly community. The Life Science building houses the MESA (Mathematics, Engineering, Science Achievement) Center, which plays an important role in fostering belonging for students pursuing STEM pathways. MESA's primary goal is to provide academic support while helping students develop collaborative work habits and effective study strategies necessary for success in rigorous science coursework. By situating our programs physically near MESA, students in Anatomy, Physiology, Microbiology, Biology, Zoology, and Botany experience academic support as an integrated and visible part of their educational environment rather than a separate service. This proximity strengthens connections between coursework, peer collaboration, and long-term transfer or Allied Health goals.

Within the classroom and laboratory, our program promotes engagement through collaborative and project-based learning. Life science courses emphasize teamwork through structured lab group activities, case-based discussions, peer teaching, and presentations. These approaches build classroom community, improve communication skills, and allow students to learn from one another while mastering complex scientific concepts. In Anatomy, for example, students complete anatomical drawings and posters that are displayed in campus hallways, along with chalk drawings around the Life Science building. Publicly showcasing student work fosters pride, reinforces mastery of content, and helps students feel connected to both the program and the broader college environment.

Faculty also intentionally cultivate belonging through inclusive representation and access to resources. Lecture materials include diverse images that reflect a range of ethnic backgrounds, and our anatomy faculty have invested in anatomical models with varied skin tones to better

represent the diversity of our students. Faculty maintain rigorous academic expectations while providing a strong and visible support system. Office hours are offered both in person and via Zoom to ensure accessibility for students who cannot regularly come to campus. Many instructors align in-person office hours with open lab times in Anatomy, Physiology, Zoology, Botany, and Microbiology so students studying in lab spaces can receive immediate one-on-one assistance. This regular faculty presence in shared learning spaces strengthens relationships, reinforces accountability, and communicates to students that they are supported.

Additional engagement is supported through Supplemental Instruction (SI), tutoring, and faculty collaboration across Allied Health and Biological Sciences. SI Leaders are embedded in Microbiology, Anatomy, and Physiology courses and hold sessions in the lab classrooms, providing direct access to models and materials. SI sessions emphasize active learning, critical thinking, and learning strategies—focusing not only on what to learn but how to learn effectively in demanding science courses. Faculty also collaborate with colleagues to share instructional strategies, new technologies, and updates regarding Allied Health admission requirements and transfer expectations. Together, these efforts create a connected learning environment that promotes persistence, academic confidence, and preparation for careers in the health sciences and transfer pathways in Biological Sciences.

Looking forward, the program is refining a planned initiative for a pre-semester “Success Skills” Bootcamp. This initiative is being specifically designed to address the foundational gaps observed in student readiness, focusing less on scientific content and more on the essential habits of mind required for STEM success. This includes improving technical reading levels, developing rigorous study schedules, and fostering the personal accountability necessary for the transition into Allied Health careers. Through this combination of public recognition, multimodal support, and explicit skill-building, we ensure that every student has the opportunity to feel connected to the program and capable of meeting its highest standards.

2. Explain how collaboration between this program and academic support and student services takes place (Accreditation Standard 2.7, 2.8).

Our department is committed to delivering high-quality instruction while working closely with academic support programs and student services to promote equitable student success. Faculty regularly evaluate course offerings, scheduling patterns, and support structures to identify opportunities to strengthen student outcomes. Key areas of focus include faculty accessibility outside of class, structured collaboration with Supplemental Instruction Leaders, coordination with MESA and the Tutoring and Learning Center (TLC), thoughtful course scheduling, and strengthening preparation pathways for students entering high-rigor Allied Health prerequisite courses.

Faculty accessibility is a central component of this collaboration. Instructors offer office hours both in person and through Zoom to ensure access for students with work, family, or transportation barriers. Many faculty intentionally schedule office hours during open lab periods so students in Anatomy, Physiology, Microbiology, Zoology, and Botany can receive immediate support while actively studying. This alignment between instructional time and support services creates continuity in the learning experience and increases student engagement and persistence.

Faculty teaching prerequisite courses for Allied Health programs, including Microbiology, Anatomy, and Physiology, work closely with SI Leaders to reinforce student learning. SI sessions incorporate structured review, collaborative problem-solving, and metacognitive learning strategies to strengthen both conceptual understanding and study skills. In addition, faculty partner with the Tutoring and Learning Center by referring students to peer tutors and integrating embedded tutoring and Supplemental Instruction into course design. The program also works closely with the MESA coordinator, who communicates regularly with faculty regarding student readiness, course planning, transfer preparation, and interview readiness for STEM-related pathways. Collaboration with the PACE office ensures equitable testing conditions for students with accommodations. For example, in Human Anatomy, faculty have developed a process that allows students to complete lab practical examinations with full accommodations in the testing center while remaining engaged with new weekly lab content. Faculty continue to promote both in-person and online options to support hybrid and multi-campus students. While the program is currently maximizing existing resources, noting that science tutors are frequently booked to capacity, faculty remain strong advocates for the increased funding necessary to expand SI and tutoring hours. By combining these institutional partnerships with a focus on student accountability and metacognition, the aim is to transform the way students engage with the sciences, ensuring they are prepared for the high stakes of a career in the health sciences.

Course scheduling is also approached collaboratively to support timely completion of Allied Health prerequisites. Faculty coordinate offerings at both the main campus and the Tehama campus to minimize overlap among Anatomy, Physiology, and Microbiology courses so students can enroll in multiple required courses within the same semester. Evening sections are offered to support working students. In response to historically lower success and retention rates in high-demand prerequisite courses, the department is strengthening preparation pathways. General Biology (Biology 10) will become a prerequisite for Microbiology with the implementation of common course numbering. Human Biology (BIOL 5) and Medical Terminology are currently strongly recommended for students entering Anatomy and Physiology, and the department is working toward establishing Human Biology (BIOL 5) as a formal prerequisite to improve readiness and overall course success rates. These collaborative and data-informed adjustments reflect the program's commitment to improving student preparation, persistence, and completion in both Allied Health and Biological Sciences pathways.

3. Describe institutional partnerships with other schools, businesses, or organizations (Accreditation Standard 2.2).

Shasta College's Life Sciences Department serves as a vital bridge between foundational education and professional career placement, achieving this through early outreach, immersive learning, strategic regional alignment, and actively promoting student achievement and equitable access through a variety of instructional practices and collaborative partnerships. Dual enrollment has been a particularly effective avenue for fostering early engagement and academic preparedness among local high school students. Courses such as General Biology (BIOL 10/10L)—articulated with AP Biology—and Human Biology (BIOL 5) are offered in partnership with area high schools, allowing students to earn college credit while completing

advanced high school coursework and providing a more seamless transition from secondary to higher education. College and high school faculty collaborate to ensure curriculum alignment, consistent assessments, and college-level rigor. These partnerships not only strengthen the academic bridge between high school and college but also provide mentoring and support systems that help students transition smoothly into higher education.

Beyond the traditional classroom, experiential learning and field-based instruction remain central to the department's teaching philosophy. The Shasta College Global Expedition Program exemplifies this approach, offering courses such as Field Biology (BIOL 5/5L), Diversity of Life (BIOL 11), and Natural History of the Neotropics (NHIS 5/5L) that immerse students in biodiversity research while partnering with international conservation organizations. The Shasta College Global Expedition Program provides authentic, data-driven research experiences that connect classroom concepts to real-world ecological challenges, promoting both scientific literacy and global awareness. Coordination of this complex program that allows students to travel/learn around the world requires extensive collaboration across departments and with external partners, including The Shasta College Foundation, The McConnell Foundation, and private donors who contribute scholarships ranging from \$500 to \$2,500. The program not only broadens students' worldviews but also builds their confidence and sense of belonging in the sciences. Furthermore, the department's commitment to student success extends to structured pathways that facilitate transfer to four-year institutions—most notably California State University, Chico and University of California, Davis—and into Allied Health programs such as Nursing, Dental Hygiene, Medical Imaging, and Physical Therapy Assistant.

The department is actively exploring the potential benefits of developing a specific Allied Health or Health Science Associates Transfer (AS-T) degree. Students pursuing competitive, high-unit pathways, such as Nursing, Dental Hygiene, Medical Imaging, and Physical Therapist Assistant programs, often lack a centralized degree "home" during their intensive prerequisite phase. Establishing a dedicated degree would not only provide these students with a clear academic milestone and improved access to financial aid but would also formalize the high-rigor preparation they receive in our core Anatomy, Physiology, and Microbiology courses.

Furthermore, the program is positioned to play a foundational role in the emerging regional medical landscape. As a consortium moves forward with plans to establish a medical school in Redding, the Life Sciences department recognizes its role as the primary pipeline for the local healthcare workforce. Our rigorous laboratory standards and emphasis on clinical application ensure that Shasta College students are uniquely prepared to enter local medical programs. Faculty are eager to explore how department curriculum can align with the requirements of this project to ensure that Shasta College students are the first choice for local medical education and subsequent residency opportunities. By evolving degree offerings and leaning into regional medical initiatives, we continue to bridge the gap between local student potential and the pressing healthcare needs of Northern California region.

4. *Describe collaboration between full-time, part-time faculty, and dual enrollment partners that promote student achievement and learning within the program.*

Collaboration among full-time, part-time, and dual enrollment faculty is central to promoting student achievement and maintaining consistency across the Biological Sciences and Allied Health programs. Dual enrollment courses such as General Biology (BIOL 10/10L) and Human Biology (BIOL 5) are closely aligned with college-level curriculum through ongoing communication between college and high school instructors. These partnerships ensure that assessments, learning outcomes, and instructional materials reflect Shasta College's academic standards. By providing early exposure to rigorous college coursework, dual enrollment students are better prepared for the expectations of higher education and can accelerate degree completion, saving both time and cost as they advance toward Allied Health or STEM careers.

While current collaboration is strong, the department recognizes an opportunity to transition toward a more formalized and intentional collaboration model with HSUP partners. To exceed current benchmarks, the program aims to develop a strategic roadmap that includes: 1) Exploring direct workshops between college faculty and HSUP partners to ensure the transition from pre-requisite courses to Allied Health programs is as seamless as possible for the students and 2) developing a framework for reviewing student success data across different modalities to identify best practices and bridge achievement gaps between pre-requisites sciences and allied health programs.

Within the department, collaboration among faculty takes place through regular meetings and shared instructional practices that support equitable learning experiences across all sections and modalities. Faculty members, both full-time and part-time, coordinate on course design, laboratory sequencing, and grading alignment while sharing resources such as lab manuals and assessments through Canvas. Communication with Allied Health faculty, including Nursing, Dental Hygiene, and Physical Therapy Assistant (PTA) instructors, ensures that foundational courses like Anatomy, Physiology, and Microbiology align with program needs and real-world applications.

In addition to faculty collaboration, our programs partner closely with student support services. The MESA (Math, Engineering, Science Achievement) Center and the Tutoring and Learning Center (TLC) provide critical academic and community support for life science students, particularly those pursuing STEM or Allied Health careers. Many instructors also incorporate embedded tutors and Supplemental Instruction (SI) leaders into their courses. These SI sessions reinforce lecture and laboratory concepts while helping students develop effective learning strategies and critical-thinking skills. Together, these layers of collaboration—among faculty, programs, and support centers—create a cohesive and student-centered learning environment that enhances achievement and persistence in the life sciences.

5. *When multiple sections of the same courses are taught in varied modalities (e.g., online, hybrid, f2f) and by different instructors, explain the processes and strategies used to establish and maintain academic standards and consistency.*

Faculty within the Allied Health and Biological Sciences programs maintain consistency across sections and instructional modalities through intentional coordination and shared resources. Department meetings each semester provide structured opportunities to review course outlines, discuss laboratory sequencing, align grading standards, and evaluate assessments for clarity and equity. Instructors teaching the same courses share digital materials such as lab manuals, quizzes, and discussion prompts through Canvas, ensuring that all students, regardless of modality, engage with equivalent content and learning outcomes. Common laboratory manuals and assignments help standardize the development of core skills such as experimental design, data interpretation, and scientific communication. Faculty also work together on updating lab safety protocols and assessment rubrics to reflect current standards in our disciplines. This approach gives the faculty coherence across all delivery formats while still leaving room for individual teaching styles. All instructors regularly assess student performance through a mixture of exams, quizzes, assignments, and interactive activities to ensure alignment with institutional learning outcomes.

6. *Describe how faculty ensure online courses are accessible (ex., Accessibility Check, and universal design) and maintain regular and substantive interaction with students in their online classes to promote engagement and learning. (ACCJC Distance Education Policy, Standard 2.6)*

Faculty teaching online and hybrid courses in the Allied Health and Biological Sciences programs ensure accessibility and student engagement through adherence to universal design principles and compliance with Shasta College's Online Education Policy and Procedural Recommendations. All course materials undergo Accessibility Check reviews within Canvas, and faculty design their modules with screen-reader-friendly layouts, captioned media, and high-contrast visuals to support students using assistive technologies. Instructors employ multiple modes of regular and substantive interaction, such as personalized video announcements, detailed feedback on lab reports and quizzes, virtual office hours, and interactive discussion boards, to foster connection and accountability. Many instructors structure their weekly modules with clear objectives and consistent navigation to help students stay organized. The use of shared Canvas templates and discussion norms across instructors reinforces a cohesive student experience even in asynchronous environments. Faculty also participate in professional development related to online pedagogy and accessibility, staying current with evolving best practices for online instruction.

3. PROGRAM DATA ANALYSIS (Standard 1.3)

Relevant data is found on the [Institutional Research Intranet page](#) within the “Instructional Program Review” folder. Strong narrative responses will reflect a clear understanding of the data and identified trends. When discussing contributing factors, focus on those within the department’s sphere of influence—such as pedagogy, curriculum design, instructional modality, course location, short-term or late-start offerings, and alignment with general education requirements.

Proposed strategies and interventions should be data-informed, actionable at the department level, and accompanied by measurable outcomes. They should also include realistic short-term timelines and align with broader, aspirational goals. These goals should be clearly articulated in Section 5 (Summary and Future Plans).

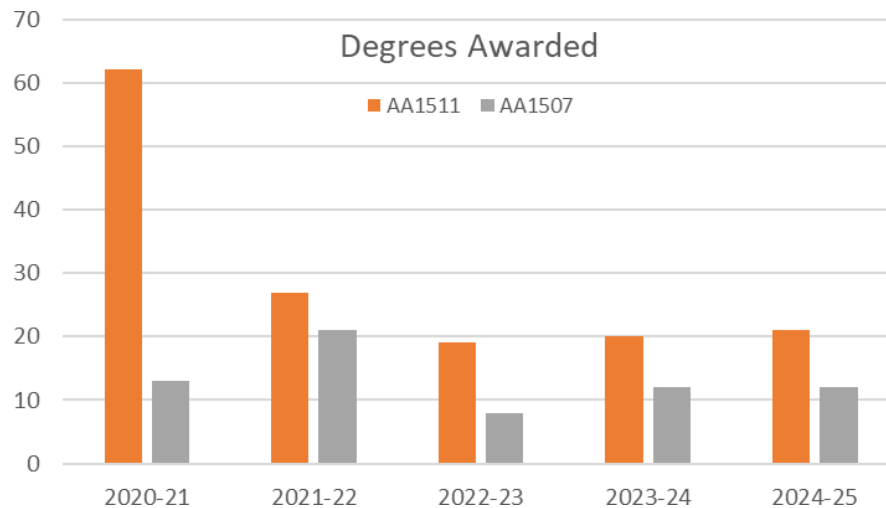
Program Completion (*Dashboard Tabs: Awards, Award Demographics, Time to Degree*) (*Accreditation Standard 2.5*): Identify challenges and opportunities for the program. Proposed strategies/interventions should be informed by the data, within departmental control, have measurable outcomes, and include practical short-term timelines and aspirational goals. **These goals should be reflected in Section 5.**

1. *Review the number of degrees and/or certificates awarded. If fewer than 10 were conferred for any award, identify possible factors contributing to the low number. Describe any planned actions the program will take to improve completion and increase the number of graduates. If an individual award has had fewer than 10 completers annually for each of the past five years, discuss the potential for program discontinuance with your area dean and summarize the outcome of that discussion in your response.* (*Accreditation Standard 1.3*)

AA1511 Allied Health averaged 30 degrees awarded per year since the 2020-2021 academic year. AA1507 Biological Sciences averaged of 13 degrees awarded per year over the five year period. The success of these programs is rooted in a deliberate "high expectations, high support" philosophy that integrates academic rigor with a deeply connected student experience. A primary driver of this success is the physical and pedagogical integration of support services, specifically through the proximity of the MESA Center and the embedding of Supplemental Instruction (SI) leaders directly within high-stakes lab environments. By aligning faculty office hours with open lab times and providing immediate, one-on-one assistance, the program transforms academic support from a separate service into a visible, seamless part of the educational landscape. This accessibility is further enhanced by a commitment to inclusive representation, where the use of diverse anatomical models and imagery ensures that a broad spectrum of students feels a genuine sense of belonging within the scientific community.

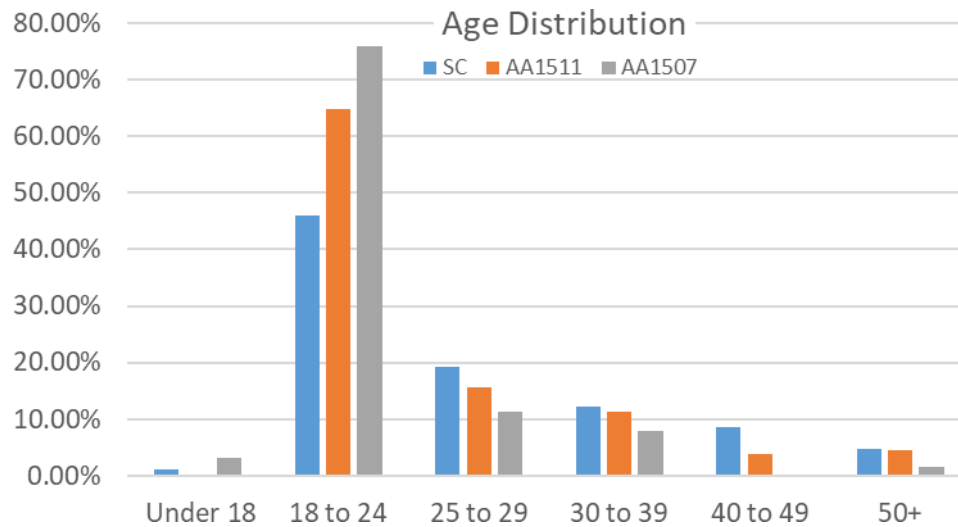
Beyond classroom support, the program’s success is sustained by strategic curricular alignment and regional partnerships. Faculty actively collaborate across departments and with local high schools through dual enrollment to create a clear, accelerated pipeline into healthcare careers. Internally, the program maintains high standards across various modalities by using shared

Canvas templates, common laboratory manuals, and collaborative grading alignments, ensuring that student outcomes remain consistent whether they are learning online or in person. This structural consistency is matched by a forward-looking regional strategy, as the program positions itself as the primary workforce pipeline for the emerging medical landscape in the North State. By exploring the creation of a dedicated Health Science degree and a pre-semester "Success Skills" Bootcamp, the program continues to bridge the gap between foundational education and professional clinical application.

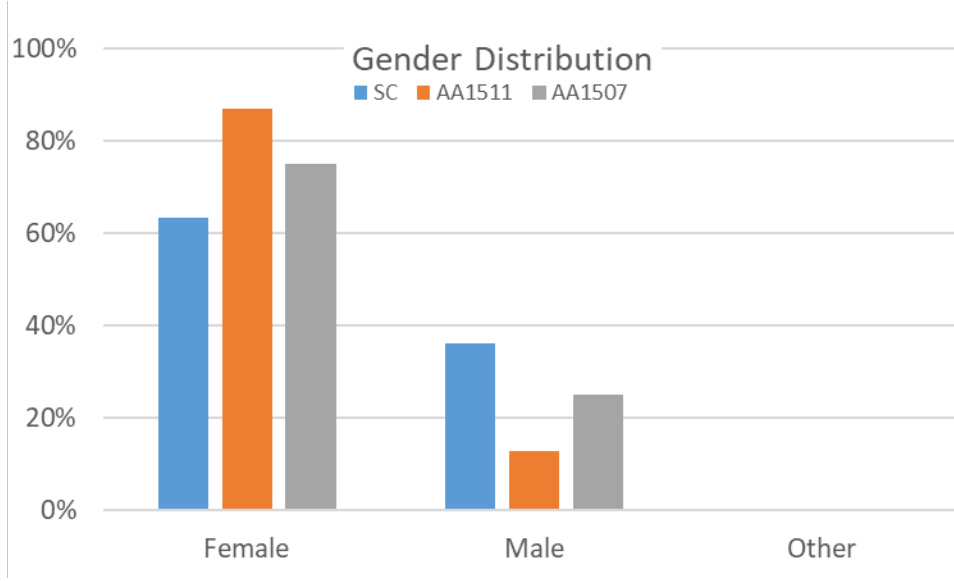


2. **Equity:** Does the program's award distribution reflect Shasta College's student population? Which groups are over or under-represented? What will the department do to improve the equity of the awards conferred? (Accreditation Standard 1.3)

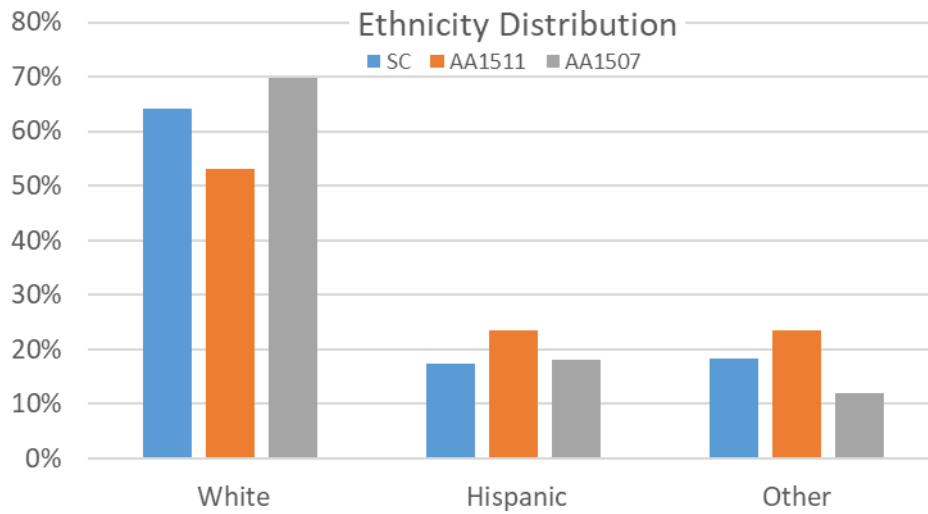
The award distribution for AA1511 Allied Health and AA1507 Biological Sciences closely reflects the demographics of the student population on most metrics. In terms of age groups, the Shasta College (SC) population is approximately 25% under 18, but this age group accounts for only 2% of the overall degrees awarded at SC. This discrepancy is likely due to the high number of students in dual and concurrent enrollment courses who are under 18. These students will often earn college credits while in high school, but do not frequently earn degrees when they are still in high school. These students are also not typically taking the core classes for AA1511 Allied Health (Anatomy, Physiology, and Microbiology) and do not earn this degree before graduating high school. The number of students in the under 18 age group earning the AA1511 Allied Health degree is zero. Since the proportion of under 18 students awarded the AA1511 Allied Health degree is a bit lower than the SC overall demographic, the 18-24 demographic is a bit higher than the SC overall number. All other age groups are close in number, so overall the age demographics reflect the college population.



Gender distribution of enrollment at Shasta College (SC) is 59% female and 41% male, and <0.4% other. Overall degrees awarded at SC are 63% female, 36% male, and <.4% other. The degrees awarded for AA1511 Allied Health have a much greater representation of female students, at an average of 84.3% female. One possible reason for this is that the AA1511 Allied Health degree is usually earned by students who are looking to enter the nursing and dental hygiene programs. For these programs, females also tend to be over-represented compared to the student population. It should be noted that nationally males are only 11-13% of the nursing workforce and student population, up from 8% in 2015. Encouraging more male students towards medical support careers can contribute to this continuing trend. Gender representation among AA1507 Biological Sciences degrees awarded is biased at 75% female. Nationally females make-up 63% of life-sciences graduates, a discipline that flips the male-dominated pattern of other STEM subjects. Building on our current use of diverse anatomical models, faculty will audit course materials to ensure that case studies and clinical scenarios feature male patients and practitioners in diverse care-giving roles. By intentionally normalizing the presence of men in nursing and clinical settings within our lecture slides and lab manuals, we create a more inclusive environment that signals to male students that they are a core part of the healthcare community.



Award demographics for race/ethnicity are 64% White, 17% Hispanic, and 18% “Other” (combined ethnicity and unknown) for the general Shasta College student population and degree awards. The AA1511 Allied Health program has fewer White students represented (53%) and a greater representation in the Hispanic (24%) and “Other” (23%) categories. The percentage in the White category fell below 60% after 2020 for AA1511 Allied Health degrees awarded. This shows a greater level of opportunity and achievement for diverse student populations in Allied Health compared to SC student population. The AA1507 Biological Sciences degrees are more represented by White students (70%) and under-represented by “Other” ethnicity categories (12%), with Hispanic student populations (18%) comparable to the overall SC student population. Specific “Other” student populations will be discussed in Section 3-5-D Disproportionate Impacts section of this Program Review.



3. *Is the median time to a degree within a three-year window? If so, what do you contribute to timely completion? If not, what factors within the program's control can help improve median time to completion (e.g., rotation schedule for required courses, identifying and reducing bottlenecks, limiting the number of excess units)? (Accreditation Standard 2.5)*

The median time for AA1507 Biological Sciences is 2.3 years with 70 units completed. The average time-to-degree for AA1511 Allied Health is 4.8 years, and students earn an average of 84 units while completing this degree. This is higher than the target of 3 years. One factor for this higher number is likely the lower-than-average success and retention rates for Anatomy, Physiology, and Microbiology. These courses are quite challenging, and students may not be adequately prepared in terms of their base knowledge and foundational study skills. Students often drop and re-take these courses, sometimes more than once. Students earning AA1511 Allied Health are often taking the core courses as pre-requisites for the nursing and dental hygiene programs (or other healthcare related fields of study), and these programs are quite competitive. Students earn more points for their applications if they have a higher grade in Anatomy, Physiology, and Microbiology. Additionally, many students in Allied Health program are part-time students completing one or two required courses per semester because of family and work obligations. Thus, students who have a passing grade in these courses may instead opt to drop and re-take them in hopes of earning a higher grade. As a result, the time-to-degree may be longer. It is unlikely that the wait-time for the Nursing Program, which can be 1-2 years, is a factor as students can apply for the Allied Health degree at the same time as applying to the Nursing Program. Perhaps enhanced student support services such as tutoring, childcare, financial aid, and academic counseling could reduce the time-to-degree.

Enrollments (Dashboard Tab: Enrollments and Demographics)

4. *Discuss program enrollment growth and decline trends (reflect enrollment data at the course and section level). What interventions will be implemented to increase enrollment?*

For the core courses for AA1511 Allied Health (Anatomy, Physiology, and Microbiology), the enrollment levels dropped significantly from the 2020-2021 school year to subsequent years. This is likely due to the COVID-19 pandemic and its effects on students' careers, families, and finances. This decline aligns with the overall decline in student enrollment across campus. The most impacted groups for these courses in terms of enrollment decline are females (dropping from 628 in 2020-2021 to a subsequent average of 472), Black or African American students (dropping from 16 in 2020-2021 to a subsequent average of 7), Hispanic students (dropping from 172 in 2020-2021 to a subsequent average of 124 between 2022 and 2024; the number increased to 166 in the 2024-2025 year, so this group may be rebounding), and White students (dropping from 439 in 2020-2021 to a subsequent average of 348). Enrollments declined relatively equally among age groups, although those under 18 and over 50 were less impacted.

The department is actively advocating for increased funding to expand the hours of Supplemental Instruction (SI) and peer tutoring, particularly as current science tutors are frequently booked to capacity. To address this demand, faculty are strengthening

partnerships with the Tutoring and Learning Center (TLC) and MESA to better coordinate student readiness and interview preparation. Additionally, the program is integrating embedded tutors into high-rigor prerequisite courses to ensure that specialized, one-on-one support is a consistent and accessible part of the laboratory and classroom experience.

To help increase enrollment, more modalities and times are being offered for these core courses. In-person and hybrid options are offered, and times range from early morning (8:30am) to evening courses (some ending at 9pm) to accommodate the varying needs of students. The department has an ongoing goal for expanding offerings to more modalities and times, with the main hindrance being staffing issues.

	AA1511		AA1507	
Academic YR	HC	Enroll	HC	Enroll
2020-21	753	1081	166	226
2021-22	585	821	89	125
2022-23	576	819	97	127
2023-24	572	807	108	134
2024-25	652	917	124	163

CTE Programs Only

(For the following questions cite your sources for data. Examples of data sources can include Perkins Core IV, DataVista - Strong Workforce data. Also, any other review of relevant external databases. <https://www.shastacollege.edu/faculty-staff/institutional-effectiveness/research-reports/> Institution-set Standards under Outcomes Reporting. CTEOS data under Career Education)

- *Summarize current labor market trends and data that demonstrate demand for graduates in this field. If the labor market trends have consistently declined, and/or the number of individual awards conferred has been less than 10 annually for the past five years, discuss the option of program discontinuance with your area dean and summarize the discussion in the response.*

N/A – AA1511 and AA1507 are not CTE programs.

- *Using current data metrics available, compare program outcomes to Institution-Set Standards for job placement and address hiring percentages.*

N/A - AA1511 and AA1507 are not CTE programs.

Course Retention and Success Rates (*Dashboard Tabs: Success/Retention, Success/Retention by Course, DI Demographics*) Identify challenges and opportunities for the program. Proposed strategies/interventions should be informed by the data, within departmental control, have measurable outcomes, and include practical short-term timelines and aspirational goals. **These goals should also be reflected in Section 5.**

A note about Disproportional Impact (DI): Occurs when a subgroup of students is achieving an outcome at a rate/percentage substantially lower than those in the other subgroups.

5. Retention Rate:

A. How does the program's retention rate compare to the college average?

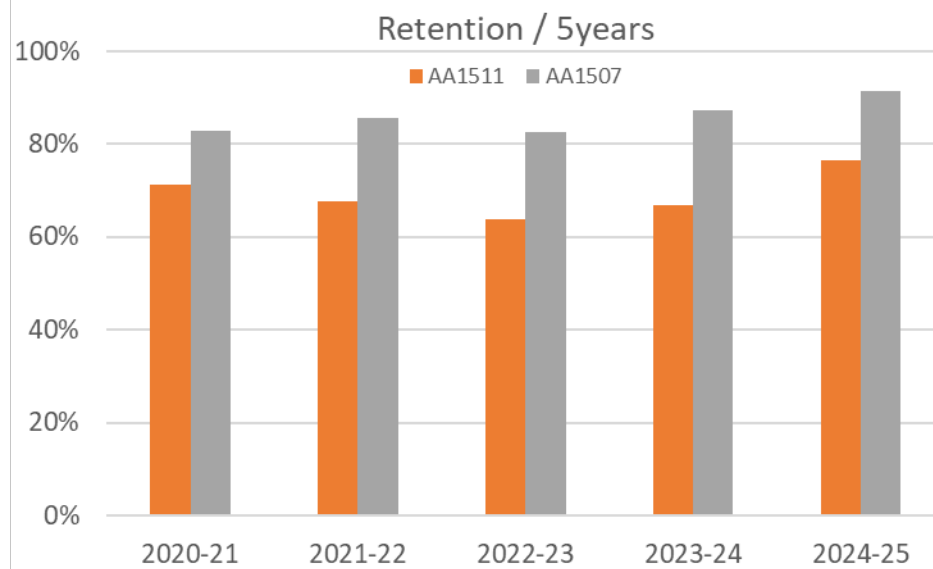
Courses comprising AA1507 Biological Sciences (BIOL1, BOT1, ZOOL1) had a retention rate in-line with the SC average. For the core courses for AA1511 Allied Health (ANAT1, PHY1, and MICR1), the retention rates are on average about 17.5% lower and success rates are on average about 20.5% lower than the SC average. Among these three core courses, Anatomy has the lowest retention rates overall, being on average about 24% lower than the SC average and having a low of 52.6% in the 2023-2024 year. Traditionally, students take Anatomy as the first in this series of core courses, and it is a very challenging course. Students may enter the course unprepared and find it necessary to drop and retake the course another semester.

Retention rates are highest for Microbiology, which is usually the last course taken in the series of Anatomy, Physiology, and Microbiology for most students. The average retention rate was just 6.4% below the college average.



B. Discuss the program's 5-year retention rate growth or decline trends (reflect on data at the course and section level).

Retention rates for the core courses for both AA1507 Biological Sciences (BIOL1, BOT1, ZOOL1) and AA1511 Allied Health (ANAT1, PHY1, and MICR1) declined between the 2020-2021 and 2021-2022 academic years. This decline is likely related to the COVID-19 pandemic which caused all courses to be moved to an online format. Because these courses all have integrated laboratory components, and labs could not be in person, this could have been a factor impacting declining retention rates. The retention rates were stable between 2021 and 2024, but have increased in the last year (2024-2025). Retention for AA1507 Biological Sciences has increased over the past two years (2023-2025).



C. What interventions will be implemented to increase retention rates overall?

Faculty in the Allied Health core (ANAT1, PHY1, and MICR1) are committed to redesigning the student experience in AA1511 courses to ensure every learner feels they belong in the healthcare field. To remove systemic barriers, we are integrating proactive academic supports like Embedded Tutoring directly into the curriculum and adopting mastery-based grading to focus on growth rather than penalties. Recognizing the diverse lives of our students, we are expanding flexible evening and hybrid pathways. Beyond logistics, our faculty are collaborating with campus support programs to create a culturally responsive community where every student's lived experience is valued as an asset to their future professional practice.

In addition, the department is prioritizing increased funding for Supplemental Instruction (SI) and tutoring, which are currently operating at maximum capacity. Furthermore, the faculty are discussing the development of a pre-semester "Success Skills" Bootcamp and advocating for Human Biology (BIOL 5) as a formal prerequisite to ensure students possess the "habits of mind" and foundational knowledge necessary

to survive the initial transition into the sciences.

To ensure these improvements lead to long-term professional success, the department is also interested in initiating a collaborative review with Health Science programs regarding admission determinants. This dialogue will focus on the tension between grade performance and recency requirements. By evaluating how these grades correlate with clinical success, the faculty aim to refine entry standards that more accurately reflect a student's current mastery. Additionally, the department is exploring a transition toward a dedicated Allied Health degree "home," which would provide these students with a clearer academic identity and sense of belonging to increase retention rates during their high-stakes prerequisite phase.

The program is also moving beyond general inclusive imagery toward the implementation of specific, evidence-based equity frameworks. Faculty are being encouraged to participate in the Equity Institute and adopt established models such as The PERSISTENCE Project, Ascend, Caring Campus, and Grading for Equity. These strategies aim to replace traditional high-stakes testing hurdles with pedagogical practices that prioritize summative mastery and "warm hand-offs" between faculty and support services. By formalizing these belonging strategies and sharing them across all course modalities, the department seeks to close the achievement gap and create a more equitable pathway for the diverse student body entering the North State's healthcare workforce.

D. *Equity:* *Do the Disproportionate Impact Indicators (DI indicators) show any groups having retention rates in program courses disproportionately below their peers? What specific strategies/interventions will the program employ to move these groups out of DI? (Accreditation Standard 1.3)*

For the AA1511 Allied Health and AA1507 Biological Sciences programs, DI indicators for retention rates are disproportionately below peers in Anatomy for Hawaiian/Pacific Islander and "Other" race/ethnicity, in Physiology for "Other" gender and Hawaiian/Pacific Islander students, and in Microbiology for Under 18 and Hawaiian/Pacific Islander students.

Work to increase retention and lower DI for these groups has been ongoing, particularly for those in the "Other" categories and students in the Hawaiian/Pacific Islander groups. Additional projects and assignments are also being given by multiple faculty members, and increased presentations and smaller projects are being discussed as well. Some faculty are teaching a more flipped classroom with activities such as think-pair-share, case studies, and other group discussions and presentations in place of the traditional lecture. Additional strategies that could be implemented or augmented include more proactive outreach by faculty to students who are struggling early in the semester, aligning course content and assessments across all sections (particularly for Anatomy and Microbiology), and increasing just-in-time supports, such as additional short videos and success tips in Canvas.

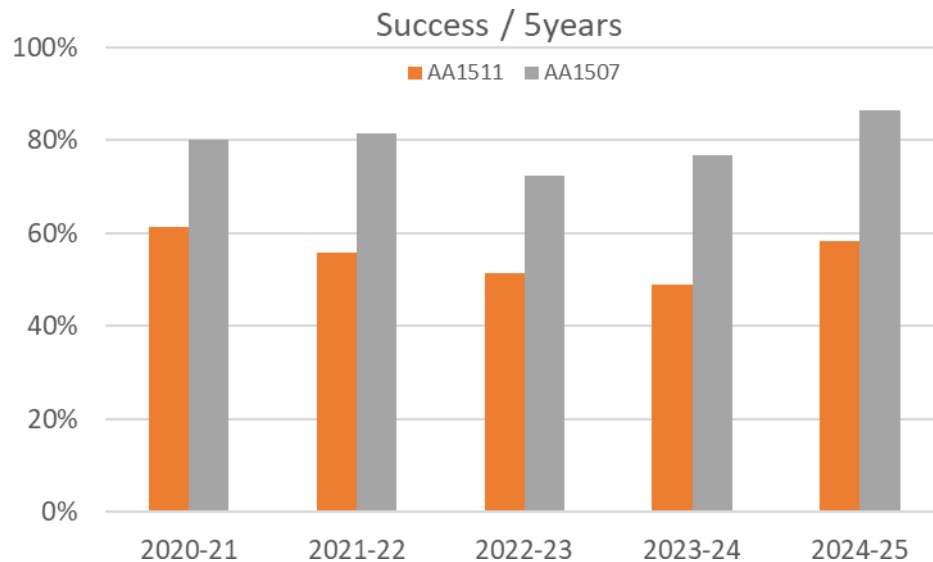
6. Success Rate:**A. How does the program's success rate compare to the college average and Institution-set Standard?**

Courses comprising AA1507 Biological Sciences (BIOL1, BOT1, ZOOL1) had a success rates were notably higher at 80%, compare to the SC average of 76%. For the core courses for AA1511 Allied Health (ANAT1, PHY1, and MICR1), the success rates are on average about 20.5% lower than the SC average. Among these three core courses, Anatomy has the lowest success rates overall, with an average of 26.2% below college average success rates. The lowest success rate for Anatomy was in the 2023-2024 year with a success rate of just 25.5% (40% below the college average).

Traditionally, students take Anatomy as the first in this series of core courses, and it is a very challenging course. Success rates are highest for Microbiology with an average of just 7.8% below the college average success rates. In the 2020-2021 year, the success rate was actually 1.6% higher than the college average.

B. Discuss the program's 5-year success rate growth or decline trends (reflect on data at the course and section level).

Student success for AA1507 Biological Sciences mirrors the trend for retention above, with a slight increase over the past three years. Success rates for the core courses for AA1511 Allied Health (Anatomy, Physiology, and Microbiology) declined between the 2020-2021 and 2021-2022 academic years. This decline is likely related to the COVID-19 pandemic and labs being moved to an online format. As more in-person offerings have increased in the past few years, success rates in these three courses have rebounded somewhat, with the highest overall retention rates for the three courses combined being in the 2024-2025 year. Success rates have declined slightly in the past few years for Microbiology.



C. What interventions will be implemented to increase success rates overall?

Faculty teaching Anatomy, Physiology, and Microbiology will collaborate on increasing success in these AA1511 core courses. Some strategies discussed include increasing Supplemental Instruction and Embedded Tutoring, augmenting equitable grading, increasing early intervention, maintaining high standards and expectations for learning while increasing transparency of assignments and supports for students (such as additional office hours, open labs, and SI supports). In the next academic year, faculty will also revise the Anatomy and Physiology courses in CurricUNET to include an advisory for the BIOL5/6 courses, which could have a significant, positive impact on retention of students taking Anatomy. The BIOL5/6 courses cover most of the same topics as Anatomy and Physiology cover but in less depth and detail. These could serve as foundational courses for students who are struggling or anticipate having hardships in Anatomy or Physiology.

These courses will also be revised to align with Common Course Numbering in the next academic year. Part of CCN for Microbiology will be an additional pre-requisite for BIOL10/10L as a requirement for aligning with CCN guidelines. This additional pre-requisite could increase student success rates in Microbiology, as the BIOL10/10L course could also provide foundational knowledge for difficult concepts in Microbiology. While this change could free up lecture time for complex concepts and increase Microbiology success rates, the department is mindfully evaluating the unit-load implications. Because Allied Health programs already require high unit counts, faculty are balancing the need for better preparation against the risk of extending a student's time-to-degree. To further optimize this, the department plans to analyze success and retention trends specifically comparing 8-week block science courses against traditional semester-long formats to identify if accelerated or extended pacing better serves student persistence.

In response to the post-pandemic decline in success rates, faculty have begun a fundamental shift in how students are assessed. Starting in Spring 2025, Anatomy and Microbiology instructors moved away from the traditional model of 4–5 high-stakes unit exams in favor of 6–8 smaller, more frequent assessments. This multiple assessment strategy is paired with flipped classroom techniques and increased transparency, including step-by-step instructions and clear rubrics for all assignments. To further bridge the achievement gap, faculty are committed to increasing just-in-time support, such as short instructional videos and success tips embedded directly within Canvas. These efforts are designed to maintain high academic standards while lowering the barrier to entry for students who may have the aptitude but lack the specific STEM study habits required for high rigor lab sciences.

The department’s success strategy is bolstered by a high-touch collaborative environment where faculty, Supplemental Instruction (SI) leaders, and MESA coordinators work in tandem. Recognizing that science tutors are currently booked to capacity, the department is advocating for expanded funding to scale these services. This internal support is matched by external alignment; as the primary pipeline for the North State’s emerging medical landscape, the department is evaluating program admission determinants in partnership with clinical programs. This includes discussing the validity of grade recency (weighing the value of an older "A" versus a recent "C") to ensure that the students entering local medical residencies and health careers are those most currently prepared for the stakes of the profession.

D. Equity: Do the Disproportionate Impact Indicators (DI indicators) show any groups having success rates in program courses disproportionately below their peers? What specific strategies/interventions will the program employ to move these groups out of DI? (Accreditation Standard 1.3)

For both AA1511 Allied Health and AA1507 Biological Sciences programs, DI indicators for success rates are disproportionately below peers in Anatomy for Hawaiian/Pacific Islander and “Other” gender, in Physiology for Hawaiian/Pacific Islander students, and in Microbiology for Under 18 and Hawaiian/Pacific Islander students.

As was indicated above for retention rates, work to increase success and lower DI for these groups has been ongoing, particularly for those in the “Other” categories and students in the Hawaiian/Pacific Islander groups. Faculty in these courses are already implementing transparent assignments with clear rubrics, clear objectives, and step-by-step instructions for completion. Just this year (beginning Spring 2025), faculty in Anatomy and Microbiology moved to a multiple assessment strategy, converting the traditional 4-5 unit exams into 6-8 smaller tests that are given more frequently during the semester. Flipped and active classroom strategies should also help increase success

as well as retention. Additional strategies that could be implemented or augmented for success as well as retention include more proactive outreach by faculty to students who are struggling early in the semester, aligning course content and assessments across all sections (particularly for Anatomy and Microbiology), and increasing just-in-time supports, such as additional short videos and success tips in Canvas.

The data highlights specific Disproportionate Impact (DI) for Hawaiian/Pacific Islander students across the core series, as well as for students identifying as "Other" gender and those under age 18. To move these groups out of DI, the department is shifting from general support to proactive, individualized outreach. This includes early-semester interventions for struggling students and a commitment to aligning content and assessments across all course sections to ensure equity of experience. To deepen this work, the department is exploring established belonging frameworks such as The PERSISTENCE Project or Caring Campus, which offer evidence-based strategies for faculty-student connection. Additionally, by encouraging faculty participation in the Equity Institute, the program aims to refine "Grading for Equity" practices, ensuring that a student's final grade reflects their ultimate mastery of the material rather than their initial lack of preparation.

To ensure individual professional development translates into departmental growth, faculty who complete the Equity Institute will serve as 'Equity Leads' during department meetings. These leads will facilitate a standing agenda item to share specific, classroom-tested strategies, such as transparency in assignment design and inclusive feedback loops, ensuring that evidence-based practices are integrated across all sections and modalities.

4. CURRICULUM

Although courses are reviewed as they come due, independent of associated inclusion in programs every 5 years, PRC recommends a review of all courses in a program as part of this Self-Study. Below are the minimum recommendations for this report.

1. Challenges to offering key courses

Briefly explain any challenges to offering key courses in order for students to complete their degree or certificate in a timely fashion. (Accreditation Standard 2.5)

Significant efforts have been made to intentionally reduce scheduling conflicts among key gateway courses, enabling students to enroll in multiple science requirements within the same term when necessary. Many of our science courses are offered in a hybrid format, which provides increased flexibility for both students and institutional scheduling. This modality allows students with employment, family responsibilities, and other commitments to engage with online lecture materials during evenings or weekends, while reserving on-campus time for essential laboratory components. Such flexibility supports the timely completion of Human Anatomy, Human Physiology, and Microbiology. Although Microbiology is the only course with a formal prerequisite at this time, these courses are characterized by rigorous academic demands, limited capacity, and substantial time commitments, which may make concurrent enrollment challenging for many students. These challenges are particularly pronounced for students who are balancing professional and familial obligations or who are still developing the study skills required for success in the sciences.

While prerequisite conflicts have been intentionally minimized, the high demand for these courses continues to present capacity constraints. To address this issue, an additional full-time Life Science faculty member has been hired to expand course offerings and increase student access. Science courses are also offered at the Tehama campus, thereby enhancing accessibility for students in that region. However, the ability to expand course offerings remains constrained by the availability of a single shared laboratory space for all physical and biological sciences. This limitation complicates scheduling and creates logistical challenges related to storage and instructional preparation, particularly for Anatomy, which requires extensive models and dissection materials. Furthermore, the absence of a dedicated and properly equipped laboratory for Microbiology further restricts the number and frequency of sections that can be offered at that location.

To alleviate some of these barriers, the program is prioritizing advocating for the acquisition of additional lab space, particularly at the Tehama campus, and exploring the potential for expanded block scheduling. Department coordinators in Life Sciences, Physical Sciences, and Mathematics have collaborated to begin this conversation, ensuring that students can progress through the programs without bottlenecks and course conflicts. In addition, by comparing success and retention rates of 8-week block science courses versus traditional semester-long formats, the department aims to identify if intensive scheduling can bypass some of the physical traffic jams in the lab while supporting timely completion.

Program Design

- 2. Are there any unnecessary or bottleneck courses that prevent students from completing the program? Could those courses be made optional? For example, there could be a required course with low interest (based on enrollment). This would prevent students from completing an award. Alternatively, legacy math and English requirements could no longer be appropriate.*

One bottleneck course for AA1511 Allied Health is Anatomy, mainly due to the lower than program average retention and success rates. Strategies to increase success and retention in this and other courses should help alleviate this from being a pinch point for students. However, Anatomy is offered across multiple campuses throughout the morning, afternoon, and early evening, and in multiple modalities (hybrid and in-person, as well as fully online for the lecture component). Furthermore, this course does not have any pre-requisites and is not itself a pre-requisite for other courses in the program. It is, however, a required course and should not be removed from the program or made optional.

AA1507 Biological Sciences does not have significant bottleneck issues as courses are block-scheduled to minimize overlapping days and times. Students can take two or three program courses a semester, and courses are on the same schedule Fall and Spring terms.

- 3. How will the program be changed to allow for stacked certificates/awards without adding units? Reach out to Interest Area Counselor for suggestions and alternative approaches. Include timelines and action items.*

The AS1605 Health Sciences degree, added in Spring 2025, serves as a complementary credential to the AA1511 Allied Health degree. While the AA1511 is strictly aligned with transfer requirements for clinical programs like Nursing and Dental Hygiene, the AS1605 focuses on the scientific core of health systems. This distinction ensures that the AS1605 serves as a versatile credential for students exploring broader healthcare fields, while the AA1511 remains the primary pathway for clinical licensure programs.

To ensure these stacked degrees provide tangible workforce advantages, the degrees complement one another by safeguarding student success against the high attrition rates of competitive clinical admissions. Students who complete the difficult science prerequisites for AA1511 but ultimately choose not to pursue Nursing (or face waitlists) still leave with a relevant AS1605 Health Sciences degree that validates their laboratory and scientific competencies. This alternative provides a critical tangible benefit, ensuring that the rigorous academic effort invested in the core sciences results in a marketable credential regardless of clinical program acceptance. In addition, completing both degrees can increase a student's total score in the multi-criteria point system used to rank applicants for limited seats in Associate Degree in Nursing (ADN) programs. The department will continue to work with counseling to ensure students are aware of this opportunity to maximize their credentials within their existing educational plans.

4. *Review the “Course Schedule” tab on the dataset and identify the courses in your program that have not successfully run in 2 or more years. Justify keeping the course active or note the course for deactivation. (ACCJC Eligibility Requirement: 20)*

For the AA1511 Allied Health and AS1605 Health Sciences programs, there are not any courses that have not successfully run in 2 or more years.

5. *In consultation with your dean, describe how our current course scheduling helps or hinders efficient program completion (Accreditation Standard: 2.5)*

For the programs/degrees being reviewed (AA1511 Allied Health, AS1605 Health Sciences, and AA1507 Biological Sciences), there are several ways in which current course scheduling helps efficient program completion. For example, there is no overlap between the required courses for AA1507 Biological Sciences courses, and minimal overlap for the required Physical Sciences (Chemistry) courses. For all degrees, scheduling has been adjusted over the past few years to alleviate multiple overlaps of majors and non-majors’ science courses to ensure timely progression through these programs. Morning and afternoon sections of high demand courses (such as Anatomy and Physiology) have been added, and modalities have been expanded to include fully in-person lecture and lab, hybrid lecture, and online lecture options (labs remain fully in-person for all science courses). Offerings of sections at the Tehama campus have been streamlined to align with these programs by doubling Chem 2A offerings (this is the chemistry course most often taken by students completing the AA1511 Allied Health and AS1605 Health Sciences degrees). Strategies to increase success rates in recent years by changes to curriculum and teaching are also aimed at helping efficient program completion. And finally, the upcoming renovation of the 1600 building will increase the available square footage for lecture and lab space, allowing more students to enroll and giving opportunities for increased sections of these courses.

The aforementioned renovation of the 1600 building could also provide a short-term hindrance in the efficient completion of degrees as it will potentially decrease space and timing for courses (depending on where these labs and lectures will be housed in the interim). A lack of true evening sections of courses could hinder some students from being able to efficiently complete these degrees, so increasing evening sections is a goal for the program overall. The waitlists for Anatomy and Physiology are always quite long, but offering additional sections is difficult due to staffing and space limitations. There is some overlap between Organic Chemistry and Zoology sections, which could hinder some students from completing their degree efficiently. However, the suggested degree progression would have students complete Zoology during their first year and the Organic Chemistry during their second year, so this overlap should not impact students significantly.

Credit for Prior Learning Opportunities (<https://www.shastacollege.edu/counseling/credit-for-prior-learning/>)

6. *Which courses within your program lend themselves to CPL opportunities? What is the plan to develop or expand the existing CPL opportunities?*

The required core courses in Life Sciences for AA1511 Allied Health and AS1605 Health Sciences (Anatomy, Physiology, and Microbiology) can all be challenged for CPL. Units can be awarded for CHEM 1A and CHEM 2A for AP exam scores of 3 or higher. Collaboration with faculty in other areas will help identify other required courses that could be expanded for CPL.

7. *What support or resources would faculty in your program need to implement or expand CPL opportunities? Identify any challenges or concerns you anticipate in implementing CPL in your discipline (e.g., academic integrity, workload, transferability).*

The main concern regarding CPL in our program is workload related to devising and implementing an assessment for CPL. Faculty agree that these assessments should be generated by lead faculty in each discipline and should be proctored on campus for *academic integrity reasons*. *Increasing stipend monies for this work would facilitate greater participation to expand CPL opportunities in the program.*

Program Map (*Accreditation Standard 2.2 and 2.5*): Program maps represent one possible pathway to complete a program. Attach a copy of the program map to the final CIPR.

8. *Review your program map with your program's Interest Area counselors and explain how the program map supports timely course completion.*

Program Map examples for AA1507 Biological Sciences and AA1511 Allied Health are attached, along with the Curriculum Maps of all potential electives. Both of these Program Maps provide a clear and efficient guided pathway for students to plan and succeed at Shasta College. Course details are expected to change over the next two years to make our courses compliant with the Common Course Numbering (CCN) initiative that is agreed upon among California Community College (CCC), California State University (CSU), and University of California (UC) systems.

Note that the Curriculum Maps and Program Maps are combined onto one single page.

- Please check this box once you have attached Curriculum Map(s) and Program Map(s). These documents will be updated throughout this review process.

5. Summary and Future Plans

This section serves as the foundation for your Annual Plans leading up to the next Comprehensive Instructional Program Review. All program improvement and resource (funding) requests (formerly called Initiatives) must be clearly linked to the goals outlined in this Self-Study.

For additional guidance and planning tools, refer to the Planning Support Canvas page.

Note: Using a six-year planning model ensures alignment with the College's Annual Planning process. Once completed, the final Self-Study will be posted on the Program Review Committee webpage, and Section 5 goals will be highlighted at College Council.

1. *Drawing on the analysis provided in Sections 1–4, identify both short-term and long-term goals for the program over the next six years. For each goal, outline strategies to achieve them, including a proposed timeline, estimated budgetary needs, and responsible individuals or roles. (Aligned with ACCJC Eligibility Requirement 19 and Accreditation Standards 1.2, 1.3, 1.4, 3.4, 3.5, 4.3)*

The success of the Allied Health and Life Sciences program is defined by a strategic shift from a traditional gatekeeper model to an inclusive-design framework that centers on student belonging and systemic support. To address the Anatomy barrier, where success rates recently hit a low of 25.5%, the program has established a Student Equity, Retention, and Success goal specifically for its core sciences (ANAT1, PHY1, and MICR1). By implementing Caring Campus (UKNIGHTED 5) principles, faculty are cultivating a supportive environment through warm referrals to the Student Success Center and the integration of Embedded Tutoring directly into the lab experience. Inspired by successful transformations at institutions like Oregon State University, which reduced Biology DFW rates from 33% to 7% over a decade, the program is moving toward a High-Structure Course Design. This model, as championed by experts like Dr. Justin Shaffer, introduces intentional scaffolding across three layers: targeted prep-work before class, active and collaborative learning during class, and low-stakes reinforcement after class. By replacing passive lecturing with peer-to-peer discussion and interactive worksheets, the program ensures students "don't get big opportunities to forget the material," thereby bridging the gap between foundational knowledge and upper-division clinical application. This evolution is further supported by a fundamental change in pedagogy; starting in Spring 2025, instructors moved away from high-stakes unit exams in favor of 6–8 smaller, frequent assessments and equitable, mastery-based grading practices that prioritize skill acquisition over punitive testing.

Short term goal: Upgrades to laboratory equipment

In the short term, the department is advocating for a \$150,000 investment to replace outdated 1998-era Microbiology and Anatomy microscopes, ensuring students are trained on equipment comparable to modern clinical settings. This equipment update, led by Department Coordinators, is a vital component of the Annual Planning process. The

Microbiology microscopes were approved for funding and have just been replaced (February 2026). Anatomy lab microscopes also need to be updated to be comparable with microscopes used in other labs (especially as the microbiology microscopes are recently updated). The Department Coordinators take a lead role on requesting funds for new lab equipment and have advocated for these needs through consistent funding requests on the Annual Plan.

Long-term goal: Updated lab spaces

In the long term, faculty are collaborating with stakeholders on the 1600 Building renovation (2027–2029) to ensure redesigned lab and lecture spaces optimize square footage and instructional efficiency. These physical improvements are essential to overcoming current bottlenecks, particularly at the Tehama campus, where a single shared lab restricts the frequency of core sections. The building renovation is still in the planning process, but conversations related to the floor plans, casework, and equipment in each learning space is centered around student success and retention. Plans for updating lab spaces will be rooted in aligning with expectations of other programs, such as nursing and dental hygiene, enhancing students' sense of belonging by creating shared collaborative spaces (particularly for the MESA lounge), and expanding storage and lab prep areas to allow for more up-to-date equipment and lab activities.

Furthermore, to ensure long-term persistence, the program is working toward dismantling financial and scheduling barriers by expanding access through flexible evening and hybrid modalities. This flexibility allows students with professional and familial obligations to balance rigorous lab requirements with their personal lives. By aligning these high-demand core sciences with the SCAILE framework and the Shasta College Promise, the program provides students, particularly those from historically marginalized or working-class backgrounds, with the financial, academic, and social capital necessary to thrive. Through this comprehensive approach of facility advocacy, high-structure course design (including the "Success Skills" Bootcamp), expansion of low-cost and no-cost textbook options in courses, and proactive belonging strategies, the department aims to remain the primary, high-quality pipeline for the North State's emerging medical landscape.

2. *Any other information/reflections from the Self-Study the Gold Team would like to share:*

The Anatomage tables that were purchased from past area plan funding have made a significant impact in Anatomy and Physiology courses. They have allowed more students to observe dissected and prosected cadavers, increase hygiene associated with dissections, and reduced the stigma associated with dissecting cadavers. The Life Science faculty would like to increase the number of Anatomage tables available on campus and add more Anatomage tablets for the Main Campus and Tehama Campus.

3. *As a result of this Self-Study, please share what the program is most proud of:*

The Life Sciences faculty are very proud of their department members. This is a department of highly collaborative individuals who value collegiality, sharing of resources, and alignment of curriculum and standards across sections and courses. We are all committed to providing a safe, welcoming learning environment for our students are always strive to find and implement strategies to increase student success.

End of the CIPR. Thank you, Gold Team!

TO BE COMPLETED by PROGRAM REVIEW COMMITTEE

See Instructional Program Review Bylaws for additional information.

Green Team Summary: *Please give an overall summary of the program highlights and CIPR strengths.*

- The final CIPR demonstrates commitment to students and it is clear that faculty are committed to continuous program improvement. Although there are areas remaining that would benefit from additional consideration and planning, this is a very well done and presented body of work. The Biology Program represents what all programs strive for—doing good work, and aiming to get better!

Recommendation for program disposition: If disposition is “with qualification” please add rationale and any recommendations for improvement. If disposition is “discontinuance,” please provide explanation.

- Without qualification
- With qualification
- Discontinuance

University Studies: Biological Sciences AA1507 Degree

CURRICULUM MAP

Complete the following courses:		Units
BIOL 1	Principles of Biology	4
BOT 1	General Botany	4
CHEM 1A	General Chemistry	5
CHEM 1B	General Chemistry	5
ZOOL 1	General Zoology	4
MAJOR		22
GENERAL EDUCATION		34
ELECTIVES		11
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Total Units		60

*Pre-Dental Hygiene students must select SOC 1

**Pre-Dental Hygiene students must select NUTR 25

PROGRAM MAP

Fall Semester, First Year

16 Units Total

ENGL C1000: Academic Reading and Writing - 4 Units

HIST 17A: United States History - 3 Units

CHEM 1A: General Chemistry - 5 Units

MATH 3A: Calculus 3A - 4 Units

Fall Semester, Second Year

14 Units Total

POLS C1000: American Government and Politics - 3

Units ART 1: Introduction to Art - 3 Units

BOT 1: General Botany - 4 Units

MATH 4A: Calculus 4A - 4 Units

Spring Semester, First Year

16 Units Total

ENGL C1001: Critical Thinking and Writing - 3 Units

COMM C1000: Introduction to Public Speaking - 3 Units

CHEM 1B: General Chemistry - 5 Units

MATH 3B: Calculus 3B - 5 Units

Spring Semester, Second Year

14 Units Total

ETHS 1: Introduction to Ethnic Studies - 3 Units

HUM 4: Humanities Through the Film - 3 Units

BIOL 1: Principles of Biology - 4 Units

ZOOL 1: General Zoology - 4 Units

60 Total Units

University Studies: Allied Health AA1511 Degree

CURRICULUM MAP

Complete the following courses:	Units
ANAT 1 Human Anatomy	5
MICR 1 Microbiology	5
PHY 1 Physiology	5
PSYC C1000 Introduction to Psychology	3
CHEM 2A Introduction to Chemistry	5
	or
CHEM 1A General Chemistry	5
	or
CHEM 2B Introduction to Organic and Biochemistry	5
SOC 1 * Introduction to Sociology	3
	or
ANTH 2 Cultural Anthropology	3
COMM C1000 Introduction to Public Speaking	3
	or
COMM 54 Small Group Communication	3
ECE 1 Human Development	3
	or
NUTR 25 ** Nutrition	3
MAJOR	32
GENERAL EDUCATION	34
ELECTIVES	7
Total Units	60

*Pre-Dental Hygiene students must select SOC 1

**Pre-Dental Hygiene students must select NUTR 25

PROGRAM MAP

Fall Semester, First Year

15 Units Total

ENGL C1000: Academic Reading and Writing - 4 Units
 ANAT 1: Human Anatomy – 5 Units
 PSYC C1000: Introduction to Psychology - 3 Units
 NUTR 25: Nutrition - 3 Units

Spring Semester, First Year

15 Units Total

STAT C1000: Introduction to Statistics - 4 Units
 ENGL C1001: Critical Thinking and Writing - 3 Units
 COMM C1000: Introduction to Public Speaking - 3 Units
 CHEM 2A: Introduction to Chemistry - 5 Units

Fall Semester, Second Year

14 Units Total

ART 1: Introduction to Art - 3 Units
 ETHS 11: Intersectionality of Race/Ethnicity/Health - 3 Units
 SOC 1: Introduction to Sociology - 3 Units
 PHY 1: Physiology - 5 Units

Spring Semester, Second Year

16 Units Total

HUM 4: Exploring the Humanities - 3 Units
 MICR 1: Microbiology - 5 Units
 ELCT: Elective - see counselor for options - 8 Units

60 Total Units

University Studies: Health Sciences AS1605 Degree

CURRICULUM MAP

Complete the following courses: **Units**

ANAT 1	Human Anatomy	5
PHY 1	Physiology	5
MICR 1	Microbiology	5
NUTR 25	Nutrition	3
CHEM 2A	Introduction to Chemistry	5
	or	
CHEM 1A	General Chemistry	5
	or	
CHEM 2B	Introduction to Organic and Biochemistry	5
SOC 1 *	Introduction to Sociology	3
	or	
ANTH 2	Cultural Anthropology	3
COMM C1000	Introduction to Public Speaking	3
	or	
COMM 54	Small Group Communication	3

MAJOR **29**

GENERAL EDUCATION **12**

ELECTIVES **19**

Total Units **60**

*Pre-Dental Hygiene students must select SOC 1

PROGRAM MAP

Fall Semester, First Year

16 Units Total

ENGL C1000: Academic Reading and Writing - 4 Units

STAT C1000: Introduction to Statistics - 4 Units

NUTR 25: Nutrition - 3 Units

CHEM 2A: Introduction to Chemistry - 5 Units

Spring Semester, First Year

14 Units Total

ETHS 1: Introduction to Ethnic Studies - 3 Units

COMM C1000: Introduction to Public Speaking - 3 Units

SOC 1: Introduction to Sociology - 3 Units

ANAT 1: Human Anatomy - 5 Units

Fall Semester, Second Year

14 Units Total

ART 4: Arts of Africa, Oceania, Indigenous NA - 3 Units

PHY 1: Physiology - 5 Units

ELCT: Elective - see counselor for options - 3 Units

ELCT: Elective - see counselor for options - 3 Units

Spring Semester, Second Year

16 Units Total

MICR 1: Microbiology - 5 Units

ELCT: Elective - see counselor for options - 3 Units

ELCT: Elective - see counselor for options - 3 Units

ELCT: Elective - see counselor for options - 5 Units

60 Total Units