SAN DIEGO MESA COLLEGE

# Program Review

Summary and Reflections with Unit Goals, Action Plans, and Updates

## Instructional Program - Biology (BIOL)

## Executive Summary

**Describe the successes and challenges your unit has faced since the last comprehensive review.**
Successes:
• Fully returned all courses to face-to-face since Covid-19.
• We have been able to maintain relatively high fill rates for our courses even with decreased enrollment.
• Faculty in our program (Daniela Bruckman, Leslie Seiger, Paul Detwiler) have been successful in obtaining grants for students. Daniela received funding through an NSF grant to incorporate multi-day field experiences at the UCI research station in Anza Borrego into the Bio 210B course and to support students in research projects. Paul Detwiler received a San Diego Mesa Foundation Innovation Grant to support a 10-week summer internship program in marine science for Mesa students at SDSU's Coastal Marine Institute Laboratory. The CMIL is an urban marine research facility where students and scientists conduct studies that help them better understand and address the environmental problems affecting the Southern California coastline. In fall 2022, a proposal to expand the program that Detwiler co-wrote with CMIL personnel received a 2023 Pathways to Inclusive Research Training award from California SeaGrant, resulting in funding to provide stipends for participants in summer 2023. Leslie is involved in the Invention and Inclusive Innovation (i3) Initiative Pilot Project, an interdisciplinary Workforce and Economic Development grant. The i3 is designed to develop 21st century workforce skills while solving community problems, provide experiential learning for students, teach students about using the entrepreneurial mindset as a skill, and learn as a cohort in an interdisciplinary environment while building confidence. A secondary goal is to gain experience to work related to STEM for students who have been traditionally underrepresented in these fields.
• We had an unsuccessful search for a full-time faculty member in anatomy and physiology last spring (Sp22) but thankfully were successful in the search this past semester (F22) and have hired Thu (Tiffy) Nguyen as a new faculty member to teach these courses.
• Multiple biology faculty are involved in mentoring students through field-based research projects that culminated in posters at the MCRC, with one faculty's (Dean Leavitt) students winning Best Experimental Poster.
• Faculty and ILTs are heavily involved in the Enrollment Management committee at various levels (subcommittees) to thoughtfully and effectively increase enrollment on our campus and pave the way for best practices at Mesa and our sister campuses.
• Anar Brahmbhatt and Jennifer Carmichael have been a part of the HSI STEM Curriculum Workgroup (part of Mesa's Title III HSI-STEM E3: Equity, Excellence and E?xito). This is where we meet with our colleagues across the STEM courses (Physics Chemistry and Math) as well as STEM and Transfer counselors, and Institutional Research analyst to work collaboratively on how STEM curriculum for biology majors and allied health track support each other, where they do not, and how to create the best suggested pathways for student success.
• Todd White is a part of Platinum 5 project focused on the "Golden 4" areas of general education: critical thinking, written communication, mathematics/reasoning (STEM), and oral communication, and more recently the fifth addition: ethnic studies. One major goal of this project is to create informal cohorts of students using STEM majors as an inaugural group.

Challenges:

• Autoclaves that were purchased for our Microbiology classes unfortunately have not come without issues. One unit was shipped with a faulty control panel. This renders this machine inoperable. We are working with our Dean and the service contractor to deal with this. Thankfully, we were able to secure an ongoing service contract to maintain the autoclaves, as it was already necessary to utilize this service. Currently, we have no alternative means for creating media. Therefore, we are asking on our BARC request for a Biosafety cabinet (BSC) and an ergonomic repeater pipettor. This is a standard piece of equipment for microbiology labs, one that we have needed but have done without, relying on outdated methods instead.
• The refrigeration systems for the microbiology labs are also currently not working. Without these, it is impossible to create/store the media necessary for lab exercises. We were recently informed that in order to get these refrigerators replaced, we will have to apply for BARC funding (BARC request completed). If we do not get the funding for this equipment, we will not be able to run microbiology labs, as these are vital to the course.
• We have challenges finding qualified adjunct faculty to teach our anatomy and physiology classes and even with the new full-time hire, we could not run all of the classes we were hoping to.
• We have broken and outdated equipment for lab classes (microscopes, spectrophotometers) that need to be replaced and microscopes will also require an ongoing service contract for maintenance.
• One of our contract faculty (Jennifer Carmichael) was hired to fill the vacant Dean of Math & Sciences position, so we now

will need to hire to replace her.
• Faculty would like to attend more professional learning conferences off-campus/out of state but current conference and travel fund monies available to support these endeavors are not sufficient to cover all costs, thereby creating financial hardship to faculty in order to attend these events.

**If applicable, describe any major curricular or service changes your unit has engaged in and the impact of those changes since the last comprehensive review.**
• Our department continues to stay current with curriculum and update the Course Outline of Record for our courses. Since our last comprehensive review, we have collaborated with City College and Miramar College to update the following courses: Bio 210A, Bio 210B and Bio 230. Changes to the curriculum primarily center around creating
more equitable and diverse courses in terms of access to textbooks (with the inclusion of OER choices for textbooks) and inclusion of individuals from diverse backgrounds who have contributed to the fields represented by these courses. We hope that the overall impact is a positive one with these additions.
• Several faculty members have engaged in FIGS (faculty inquiry groups) to help enhance curriculum. Caitlin Tiffany embarked on a FIG directed at Grading for Equity. Anar Brahmbhatt & Jennifer Carmichael have completed a FIG for Bio 210A centered around a more coherent content delivery that also took into account inconsistencies in student pre-requisite knowledge and how to bridge those gaps. Daniela Bruckman, Paige Hu and Dean Leavitt used their FIG to create a Research 101 Canvas Shell so students could learn the basics of research, find research opportunities, and connect with student researchers at Mesa. As a consequence, our students are engaging more in research through the Eco Research Program, Honors Contracts with our faculty, and the Mesa Research Conference with greater opportunities to shine and be competitive for transfer and beyond in career development.
• Anar Brahmbhatt joined the 2021-2022 Equity Minded Assignments cohort to learn about and create an assignment for Bio 205 that would engage students in ways that allowed them to explore microbiology and diseases through an equity lens: learning about specific diseases of interest to each student and highlighting racial disparities that exist showcasing their knowledge in unique creative ways.
• Anar Brahmbhatt and Jennifer Carmichael have been a part of the HSI STEM Curriculum Workgroup (part of Mesa's Title III HSI-STEM E3: Equity, Excellence and E?xito) where we meet with our colleagues across the STEM courses (Physics Chemistry and Math) as well as STEM and Transfer counselors, and Institutional Research analyst to work collaboratively on how STEM curriculum for biology majors and allied health track support each other, where they do not, and how to create the best suggested pathways for student success.
• Many of our lab courses have also been updated to provide more inclusive and equitable practices. Of note is the procurement of mobile charging carts to service individual chromebooks or laptops for each student in the class in the Bio 210A and Bio 205 lab courses. Bio 107 has also obtained a set of new laptops for each student. These courses have (or have plans to) modify their lab curriculum to allow for smaller groups (individual or groups of two) to work on lab exercises and complete computer work in the classroom. With these curricular changes, students have the benefit of a working device and their peers as well as instructor help to complete lab tasks within the class period. This will allow for individual interaction for each student and thus greater engagement and understanding with the intent of greater retention and student success.

**If applicable, describe the impact of any new resources (human, fiscal, etc) on the unit and/or action plan implementation.**
• We were able to purchase and begin using two new autoclaves for Bio 205 labs. In theory, this will allow us to prepare microbiological media and handle waste in an efficient manner with the eventual increase in sections offered. Unfortunately, one of the new machines is not working (see above for more information).
• We were provided with some monies from HEERF and the HSI grant which allowed us to update our biotechnology labs in bio 210A
• We received funding for new laptops and transilluminators in our bio 107 labs, enabling us to increase student equity in relation to graphing data and technology skills (one of our CLOs)
• We received funding for mobile charging carts to service individual chromebooks or laptops for each student in the class in the Bio 210A and Bio 205 lab courses. This will enable students to work individually on projects allowing them to complete necessary work during class time with peer and instructor support.
• We also received laptops for our Bio 200 (Biological Statistics) course, but unfortunately was not able to procure a mobile charging cart for these 24 computers.
• We hired Michael Williams as a new contact faculty member to teach microbiology, general biology, and majors biology, as well as Thu Nguyen for anatomy & physiology.
• We hired two ILTs (Devin Di Pierro and Thieny Trinh) to provide needed support for our laboratory courses.
• We received approval for funding for new laptops/chromebooks for our microbiology and 210 classes, which will improve

student equity as now each student can work on their own computer during the labs.
• We were able to secure HEERF funding to order 4 new anatomy models (2 per lab room)

**If you assess OUTCOMES, please confirm that the outcomes have been reviewed for accuracy. If you do not assess Outcomes, skip this question.**
Reviewed & Accurate

**Related Documents for Charts and Graphs**

**Executive Summary Complete**
Yes

## Data Reflection

**Trends observed in program/service area's data.**
Looking at data Fall 21/Spring 22:

Percentage point gap: Overall success rate all bio courses: 68.2% (F2F classes) – compared to School (Math/Natural Sciences) (67.9%) & Campus (71.5%)
Equity gaps: 19.3% Black/African American/ 14.2% Latinx in bio classes overall, versus 13.3% B/AA & 12.3% Latinx for the School, and 9.9% B/AA & 7.6% Latinx for Campus
Overall Bio Retention rates: 78.2 B/AA & 80.9 Latinx
Overall Bio Success rates: 50% B/AA & 59.8 Latinx

Success rate in Allied Health Track courses (Bio 205/230/235) – 67.2% overall (79.1/56.5/74.2%)
Equity gaps in Allied Health Track courses: 24.2% Black/African American/ 13.4% Latinx
Retention rates in Allied Health Track courses: 74.1 B/AA & 74.4 Latinx
Success rates in Allied Health Track courses: 44.4% B/AA & 59.1 Latinx

Success rate in Majors Biology track courses (Bio 210A/210B) – 72.9% overall (65.7/84.4%)
Equity gaps for ethnicity in Majors Biology track courses: 32.6% Black/African American & 18.1% Latinx for combined data
When looking at individual course data for the last 2 semesters provided (F21/Sp22) there were not enough Black/African American students who took each course to provide data, but Latinx data for each class was 25.2% for 210A and 15.1% for 210B.

We chose to evaluate data for these tracks because they represent the largest numbers of students in our program, as well as the greatest number of degrees awarded in our program. Unfortunately, these numbers are similar to what we have seen in the past, even with faculty consciously, collaboratively and intentionally making changes in their courses to improve equity outcomes.

Biology degrees awarded 2021/2022 – 149 (6.7% Black/African American; 35.6% Latinx; 15.4% Asian/Pacific Islander; 26.2 White)

**Describe any equity gaps in the data. Are there differences and/or patterns observed by demographics (e.g.race/ethnicity, gender, age, etc.)**
We chose to look at aggregate data for our allied health and bio major students, as these students represent the largest numbers within our program. These educational tracks do include two of the most challenging courses that we offer (bio 210A and bio 230), and faculty in these courses are continuing to implement multiple strategies to improve student success. One interesting observation in regards to our allied health students, when we looked at each course individually, Bio 205 had no disproportionate impact equity gap for Latinx with 38.2% for B/AA while Bio 235 had no disproportionate impact equity gap for B/AA with 14.1 gap for Latinx. Bio 230 had disproportionate gaps for both groups (23.3% B/AA and 17.1% Latinx). This becomes challenging to analyze as these courses serve the same populations of allied health majors. Human Anatomy (Bio 230) is the most challenging course taught in the biology department. It has historically had one of the lowest success rates (for all groups). Instructors have been working together to figure out ways to improve student success (for all populations) as well as reduce equity gaps but there is only so much that can be done in a course this rigorous. One plan that we have is to create a prerequisite course that better prepares students for the rigor of this course. We do see improved success rates as students move through the usual course sequence of taking 230, then 235 and finally 205, but for various reasons, this is not always how students choose to take (and are sometimes counseled to take) these classes. Additionally, we will be meeting with our

colleagues in math and science to review curriculum in terms of skills and knowledge needed from one course or discipline to another. This will be beneficial for potentially increasing student success and improving equity gaps in the Bio 210A course (first course for majors) which is also an extremely rigorous course. Even though we are still seeing significant equity gaps in our Black and Latinx students, we are pleased to note that they do represent a large proportion of students who are receiving allied health and biology degrees. In fact, Latinx students represent the largest degree receiving group overall (35.6%).

**Related Documents for Charts and Graphs**

**Describe the discussion(s) that took place about the unit's learning outcomes assessment data.**
All course and program outcomes were successfully evaluated over the previous evaluation cycle. For the new cycle, the DOCs led a discussion to review all CLOs and PLOs and made changes as necessary. To facilitate the ability to more easily assess CLOs for this upcoming shortened cycle, especially with the majority of our classes having multiple sections and often taught by adjuncts as well as contract faculty, DOCs created a shared file containing the specific assessment tools that will be used in each course. We will create a timeline indicating when each course will be assessed, and then the DOCs will distribute the evaluation tools to each faculty member teaching the class. Data will be collected by the DOCs and lead faculty, with the lead faculty evaluating and reporting on the data. Our various endeavors in further developing curriculum (see “Curricular changes” section) have aided in enhancing our discussion about course outcomes data analysis and future best practices.

**Data Reflection Complete**
Yes

## Practice Reflection

**Describe current practices your program/service area has engaged in that you believe impact the above data trends and equity gaps.**
• Faculty have been working on FIGs within the department and across schools to support students and improve equity outcomes. Examples include: Daniela Bruckman, Paige Hu, Dean Leavitt (Biology), Erin Evans (Sociology) and Waverly Ray (Geology) to create a research resource titled, "Teaching Research for Equity and Excellence". This resource will take the form of a Canvas website where students will be able to access research opportunities, find community, build research skills view models of successful research endeavors.
• Caitlin Tiffany’s FIG on Grading for equity as well as the Bio 210A FIG conducted by Anar Brahmbhatt and Jennifer Carmichael centered around a more coherent content delivery that also took into account inconsistencies in student pre-requisite knowledge and how to bridge those gaps have also helped to decrease equity gaps.
• Multiple faculty have participated in the CEER (Curriculum Equity and Excellence Review) summer institute to examine the cultural contexts that they bring to the classroom, re-imagine classroom activities and assignments, and develop strategies to be more responsive to students in order to increase equitable practices.
• Faculty have participated in Path to STEM Success as well as the HSI E3 STEM Curriculum Workgroup workshops and events. We will also be collaborating with colleagues across our School’s disciplines in a STEM curriculum summit to discuss curriculum especially in terms of skills and knowledge needed from one course or discipline to another. This will include the challenges from pandemic teaching and learning, legislative changes, and barriers to transfer with an equity focus.
• Faculty have attended out of state conferences at large personal expense (Anne Geller, Kevin Krown – HAPS) that included update speakers and workshops on improving DEI specifically in anatomy and physiology classes.
• Faculty are involved in mentoring students through field-based research projects (Eco Research Scholar Program in 2020/2021 and currently independently) that culminate in posters at the MCRC.

**What other factors (internal or external) might also impact the above data trends and equity gaps?**
• In general, faculty have found that many of our students had challenges returning to in person instruction after remote instruction due to Covid-19, especially in relation to motivation, study skills, and time management. Absences due to COVID-19 have compounded students’ abilities to stay on top of content and remain engaged in their courses.
• There is a lack of support services available for evening students (DSPS, STEM center, food) which negatively impacts these students.
• While we have seen increased success rates and improved equity outcomes when students utilize tutoring services (STEM center, embedded tutors and peer mentors) we have difficulty recruiting and keeping quality tutors. When such tutors have been available, we have seen that students are better supported and as a consequence more successful (to date we have had tutors and mentors for Bio 107, Bio 235 and 230, Bio 210A/B).

### Summary and Reflection

**Related Documents for Charts and Graphs**

**Practice Reflection Complete**
Yes

## Mid-Cycle Updates

**YEAR 2 Updates (2023 - 2024)**

**Provide any edits or updates to the prompts originally documented in the Executive Summary section for Year 2.**
We had some adjunct faculty who were long time instructors in physiology and general biology retire, so we had to hire some new adjuncts to replace them. We were able to find someone for the 107 class and Bill Brother's was able to teach a physiology class as his pro-rata assignment, but we'll need to find some new qualified adjuncts for anatomy &/or physiology for next semester if we want to maintain the same number of classes. We also had to replace a microbiology adjunct due to a significant illness at the beginning of the semester, and thankfully were able to quickly hire someone who is also teaching at Southwestern. We are finding it increasingly difficult to staff our microbiology courses with qualified faculty and this is now the limiting factor in our desire to increase sections.

We are in process of hiring to replace a full time faculty member due to Jennifer Carmichael's transition to dean of math and science and hopefully will find someone to begin in the Spring 24. **Update - David Lizarraga was hired as a new contract faculty member. Tiffy (Thu) Nguyen is beginning her first evaluation cycle. Michael Brewer and Todd White are in their 8th year and undergoing evaluation for promotion to full Professor. Caitlin Tiffany is in her 4th year and undergoing evaluation for tenure and promotion to associate professor. ** Update - Brewer, White & Tiffany all successfully attained promotion.
Three faculty (Geller, Brewer, Tiffany) attended the Human Anatomy and Physiology Society annual conference in May 2023. Kevin Krown attended the American Physiology Society Summit. Other instructors indicated that they would have liked to attend conferences but due to cost and other constraints, were unable to.
We had two ILTs requiring extended leave this semester, and we were able to hire a temporary replacement ILT for the semester for coverage.
We received some new reproductive and urinary models for the biology 160 lab with student retention funds in order to revise instruction and improve diversity, equity and inclusion when discussing sex and gender in the anatomy and physiology course.
CORs for bio 160 and 110 were updated and in process of curriculum approval.
We are working on remodeling one of our classrooms for more integrated and innovative instruction with monies from the HSI STEM grant.
We received the repeater pipettor that we requested for our microbiology class, as well as the biosafety cabinet. However, this has not been installed yet due to short staffing in facilities, and therefore is having a negative impact on our program as we are unable to safely store materials for this course. We are also still waiting for the refrigerators that were approved for the microbiology prep area, and these have yet to even be ordered.

**Provide any edits or updates to the prompts originally documented in the Data Reflection section for Year 2.**
The additional two semesters available for analysis (F22/Sp23), do not indicate any significant differences from the previous analysis therefore there are no edits or updates to our previous data reflection.

**Review Outcomes Report. Review the unit's outcomes assessment process for 2022 - 2023. Discuss connections to unit goals/action plans/resource requests.**
We are on track for completing the assessments for all classes that are currently being taught. In this cycle, all courses assessed have met or exceeded their benchmark and there were no further actions necessary other than the continuous course assessments that all instructors make in their individual classes.

**Provide any edits or updates to the prompts originally documented in the Practice Reflection section for Year 2.**
We are still dealing with COVID absences this semester with the most recent outbreak. This becomes especially challenging in the bio 230 (Human Anatomy) course since the lab room is utilized back to back with classes, and we currently don't have the facilities or additional models to be able to offer make-up anatomy lab practicals in a similar format to the original exam. The addition of the food truck is a welcomed positive support for our evening students (and faculty), but early closing hours in the STEM and DSPS centers still negatively impacts our evening students. We continue to encourage our students to both become, and utilize the tutoring and mentoring programs. There are no other significant edits or updates to the practice reflection.

## Summary and Reflection

**YEAR 3 Updates (2024 - 2025)**

**Provide any edits or updates to the prompts originally documented in the Executive Summary section for Year 3.**

This has been a challenging few months for our department as we have experienced the loss of multiple faculty and ILT colleagues, leaving us short staffed in many areas. We had one contract faculty member (Caitlin Tiffany) resign prior to receiving tenure, so we were given permission to automatically fill her position. We conducted a search in the Fall 24 semester and were successful in hiring a replacement (Gianfranco Calafiore) to teach the anatomy and physiology classes beginning in Spring 25. While we are extremely happy to add him to our team as a contract faculty member, he was already working in our department as an adjunct teaching the Human Anatomy class. This means in actuality that we will still be short staffed in these classes because he will only be able to teach one additional class (Bio 235). Because of this, we will be cancelling one of our evening anatomy sections unless we can find a qualified adjunct, which has been extremely difficult not just for us, but also for our colleagues at City and Miramar. Unfortunately, we also had a retirement of another anatomy and physiology faculty member (Kevin Krown), so we will be submitting a faculty hiring request to replace him, as it is extremely challenging to find qualified adjunct faculty to teach these courses. Additionally, we had another contract faculty member submit a resignation (Paige Hu), so we will need to request an additional faculty hiring request for an instructor capable of teaching our major's biology and non-major's biology courses. Prior to the start of the Fall 25 semester we had two instructional lab technicians (ILTs) resign/transfer, leaving our other ILTs struggling to manage all of our labs. Thankfully, we were able to get a full time NANC position for the fall to assist our remaining ILTs, at least making it possible to run the classes (although still with significant staffing challenges), and were given permission to hire replacements for the lost ILTs. The department conducted a search in the fall of 2024 and are hoping to have these new hires in position beginning in the spring of 2025. Even with the replacement for the lost ILTs, we are still struggling to have enough instructional support to increase the number of sections of microbiology. Therefore we will be requesting an additional ILT position during this PR cycle.

We requested and received BARC funding for purchasing anatomy models which could be used to provide lab practical exams for DSPS students who require accommodations and students who miss lab exams and require makeups, so that we can provide more equitable support for students and increase retention in this course. Models have been ordered but there is a very long wait time to fulfill these orders from the companies who manufacture them, so we are still waiting to receive the majority of these models. We also received funding to purchase weighing scales as well as two types of specialty low- and ultra-low temperature freezers to support he development of our major's biology course (Bio 210A). Our understanding is that the freezers have been ordered but we have not yet received them. Subsequent to the 2022 PR cycle we received BARC funds to purchase a biosafety cabinet. However, this has not been installed yet due to short staffing in facilities, and therefore is having a negative impact on our program as we are unable to safely store materials for this course.

We have provided more creative and student centered spaces and events in the area of our faculty offices with the addition of biology-themed road signs decorating our walls and by offering "Baked Goods with Biology" a few times a semester where faculty host students with some tasty treats. We also completed the remodeling of a classroom utilizing monies from the HSI-STEM grant to support more integrative and innovative instruction and faculty have begun teaching in this space. Due to the positive feedback from students and faculty, we have added a department goal to continue to increase these student-centered events during the semester to increase the feeling of inclusivity and support our equitable classroom activities.

Biology faculty participate in multiple activities at the department, school, and college level, including participation in shared governance committees. We have faculty who have attended conferences to support their professional learning including Geller (HAPS), Brahmbhatt & Lizarraga (STARTneuro), and Williams (Saber West & ASMCUE). Anne Geller has been a long standing member of the Human Anatomy & Physiology Society (HAPS) and a past BOD member. Attendance at the annual conference provided update seminars and workshops specifically focused on the teaching of A&P, with a large number of workshops focusing on DEI issues in A&P courses. Anar Brahmbhatt and David Lizarraga attended a two-day community building symposium for invited community college faculty hosted by the STARTneuro program faculty at UC San Diego. STARTneuro is an NIH supported program for community college students that have newly transferred to UCSD and is recruiting students who are: 1) interested in neuroscience research and 2) from underrepresented racial and ethnic groups and socio-economically disadvantaged backgrounds. The program supports students by providing them with a fully funded summer research training, mentorship, and funding for students to attend and present at a neuroscience research conference. Anar and David also attended presentations by two other STEM research programs for new UCSD transfer students in either engineering or physical science (EMPOWER and T-TRex, respectively). David Lizarraga shared details of this symposium with the Biology faculty during a department meeting. David Lizarraga and Tiffy Nguyen, our newest contract faculty members were also part of a semester long ESCALA cohort to learn about equitable teaching practices specifically for our Latinx students. Mike Williams attended the SABER West 2024 conference at UC Irvine in January 2024 and plans to attend

the ASMCUE 2024 conference in Pittsburgh, PA this November 2024. The SABER West conference exposed him to other faculty members in undergraduate research to network with and learn new ideas. Specifically, he was able to meet other microbiology instructors across the San Diego area to share ideas with. He also attended several influential workshops on holding effective office hours, art in STEM classes, and using effective backwards design and learning objectives in courses. Mike's goal is the ASMCUE conference will guide me towards some more microbiology specific resources and networking opportunities since the conference is focused on undergraduate education specifically in microbiology. Other faculty would love to go to similar conferences but did not due to the limited financial support provided by the college. The cost to attend a conference located out of the region averages approximately $1500-2000 with registration, travel, lodging and food. Travel funds provided by the department only cover approximately $500 per faculty member, and the college's conference and travel fund only provides an average of $250. Last year they ran out of funds by the beginning of Spring semester.
Todd White is involved with enrollment management. Thu (Tiffy) Nguyen is a member of the academic senate. Daniela Bruckman is co-chair of our Mesa College Research Conference and received an innovation grant to fund the conference in 2024. She is working with the other conference chair to seek out funding for this year's conference. Bruckman has also recently taken over the biology department scholarship committee chair position (from Geller). Anne Geller, Mike Williams and Tiffy Nguyen are members of the scholarship committee.
Our faculty have collaborated with other programs to support our students (and other faculty), including creating a document in collaboration with the DSPS department to support students requiring a memory aid accommodation (Brewer), and arranging for a virtual presentation (in conjunction with student health services) on Epilepsy and Seizure First aid in recognition of Epilepsy Awareness Month (Brahmbhatt). We also had faculty participate in safety trainings to ensure better procedures during emergency situations. We also support the college's goal of sustaining a sense of community that extends across campus and constituencies through a collaboration between anatomy faculty (Geller & Nguyen) and athletic training faculty providing a workshop utilizing our anatomy cadavers for Japanese athletic training students during their visit to our campus. The HSI Title III STEM E3 grant sponsored two workshop for students with Biology Professor Mike Williams facilitating a bio-chem workshop series where students learned advanced biochemical techniques that will make them lab ready and marketable for a bio-industry job. Anne Geller and Anar Brahmbhatt are lead writers for program review and Anne Geller is the Department Outcomes Coordinator. All of our faculty who are permitted to participate in search committees, faculty evaluation committees, and adjunct evaluations actively participate in these processes. Although we have a fairly large department, our faculty are participating in many different venues in addition to their teaching commitments and most are being stretched thin with their additional responsibilities. This is another reason why we are requesting two new faculty members in this cycle.

**Provide any edits or updates to the prompts originally documented in the Data Reflection section for Year 3.**
In looking at data trends from Fall 21 through Spring 24, in all biology classes we are still experiencing a disproportionate impact (utilizing the 80% data) for Black/African American students (19%) in 583 students (out of a total of 10,438 total), and for Pacific Islander/Native Hawaiian (24.2%) in 42 students (out of a total of 10,438). Using these specific metrics, it appears that we are not experiencing a disproportionate impact in our Latinx students over this timeframe, although that is not the case when we use the percentage point data.
Looking at data for our allied health classes ((230/235/205) during this same timeframe we served 4105 total students and had an overall success rate of 70.9% . There was a disproportionate impact equity gap of 28/7% in Black/African American students (n =233), and 19.4% for Latinx students (n = 1517). Once again when we disaggregate the data we see no disproportionate impact equity gap for the bio 205 (Microbiology) course, but a gap of 29.8% for B/AA and 16.7% for Latinx in the bio 230 (Human Anatomy) course and 30.7% B/AA and 21.7% Latinx in the bio 235 (Human Physiology) course. We believe that the increase in success rates for the microbiology course can be explained by the fact that it is usually the last course students take in the sequence, and by that time, they have figured out strategies for success. We were hoping to create a better prerequisite course for this sequence to help improve success in the anatomy and physiology courses, but with the state legislation of CCNs coming down the pipeline coupled with the unknown element of whether we will be able to even continue to require prerequisites, we have decided that it is not the right time to pursue this strategy to enact positive change.
For our major's sequence (210A/210B) courses over this same timeframe, we served a total of 1056 students and have a disproportionate impact equity gap of 18.4% for Latinx students. Our overall success rate for these classes is 77.6%. We do see an increase in student success for those students who utilize the availability of a peer mentor for the courses, and we continue to work closely with the tutoring center to find peer mentors for our classes. Unfortunately, our faculty member who was the liaison for the tutoring center has chosen to resign for family reasons, so we are hoping to be able to hire additional full time faculty who might be able to eventually take over this important position for our department.

## Summary and Reflection

**Review Outcomes Report. Review the unit's outcomes assessment process for 2023 - 2024. Discuss connections to unit goals/action plans/resource requests.**

At this time, we anticipate being fully completed with assessments for all of our classes that we are currently teaching. We have two courses (Bio 120 and Bio 215) that are not currently being taught, and therefore we will not be assessing them during this cycle. We are discussing whether to completely inactivate them as we do not see the demand for these classes in the near future. Our contract and adjunct faculty have been very instrumental in ensuring that we are meeting or exceeding the outcomes for our courses, and have been successful with only a few exceptions. This speaks to the high quality of our current team of instructors, and their commitment to providing equitable and excellent instruction and support to our students. In order to continue to maintain our department's dedication to equity and excellence and continue the work we have been doing to support our students, we will be requesting two faculty during this cycle, one to replace a faculty retirement (unit goal #7) and one to replace a resignation (unit goal #8).

**Provide any edits or updates to the prompts originally documented in the Practice Reflection section for Year 3.**

Faculty regularly perform their own self evaluations in recognition that continuous self improvement is necessary to ensure continued effective support of our students in our classes. Contract faculty provide mentoring to our students as well as department adjuncts, discuss challenges and collaborate to come up with solutions, support each other within and outside of the classroom, and frequently interact in social and collegial settings.

## YEAR 4 Updates (2025 - 2026)

**Provide any edits or updates to the prompts originally documented in the Executive Summary section for Year 4.**

We are still working with a reduction of staffing and a challenge to finding qualified faculty to teach some of our courses. We submitted FHP and were approved to replace two faculty (one due to retirement and the other to resignation) and an ILT who was let go. Initially we were also planning on requesting an additional ILT to support our microbiology courses as we have been short staffed there, but for a variety of reasons we decided to forgo that request until a future time. We are currently in process of hiring for one faculty position (anatomy & physiology) and the replacement ILT, but due to our Dean's schedule, we needed to postpone the formation of the second faculty hiring committee until the spring 26 semester, and therefore will not have that faculty member hired until the fall of 2026. We are hoping to have the new A&P faculty and ILT start at the beginning of spring 26 (update: search was successful and we have hired JiYoung Park for this position). We were able to hire a replacement ILT and decided that this person will help out our microbiology courses (starting end of October, 2025), allowing us to increase our microbiology sections to 8. We also have a faculty member (Tiffy Nguyen) who is out on long term maternity leave. Tiffy is also our physiology lab lead instructor, so in her absence our newest hire, Gianfranco Calafiori has agreed to handle the physiology labs. Because of being short staffed, all of our FT faculty are stretched extremely thin and being asked to do more with less.

Faculty in our department are providing feedback regarding the new CCN process that will affect our biology 107 (general biology) and anatomy and physiology courses (biology 230 and 235). While there should not be any significant impact or changes with the biology course CCN being adopted, there may be a significant impact if the anatomy and physiology CCNs are approved as 1000 level courses with no prerequisites. Currently, our 230/235 sequence requires a prerequisite, which can be the bio 107 or bio 160 (for the anatomy class). Loosing the prerequisites will significantly impact both student success in these classes, as well as our curriculum management. We offer between 24-26 sections of bio 107 due to strong demand, which is significantly related to the large number of biology students that are in the allied health track. If bio 107 is no longer needed for allied health students, we will not need as many sections of 107 and therefore will potentially have a significant decrease in FTEF that will affect our department, as well as the college and district.

Biology faculty also continue to participate in multiple college activities, including supporting various student clubs, organizing the Mesa College research conference, awarding student scholarships, participating in shared governance; they attend professional development activities and conferences , mentor new faculty and adjuncts, and participate on evaluation and hiring committees.

**Provide any edits or updates to the prompts originally documented in the Data Reflection section for Year 4.**

There are no significant changes noted in the data provided in relationship to course success rates and equity. In 2024/25 there were 139 biology degrees conferred, with 41% of them for the allied health track. We did request additional data specifically in looking at success rates in our bio 230 and 235 students (anatomy and physiology) relative to whether they took the bio 107 (general biology) or bio 160 (elements of anatomy and physiology) for their prerequisite course. Data was provided by the OIE and looked at the most recent cohort of students (Su24/F24/Sp25). Data indicated significant differences in success between students taking the 107 vs 160 class and success in both anatomy (bio 230) physiology (bio 235). Average success rate for bio 230 with 107 prereq - 59% vs 160 prereq - 65%. Average success rate for bio 235 with 107 prereq - 74% vs 160 prereq - 86% This data not only supports the utilization of bio 160 as better prerequisite, but how extremely valuable prerequisites are for

these allied health students. As mentioned above, with the adoption of the new CCNs for A&P, we may lose the ability to require any prerequisite. This will have a significant negative impact on these students.

**Review Outcomes Report. Review the unit's outcomes assessment process for 2024 - 2025. Discuss connections to unit goals/action plans/resource requests.**

Our department was very proactive in completing all CLO and PLO assessments prior to the start of this year, so we have decided that we will not be doing any repeat assessments during this cycle. Our department Outcomes Coordinator is planning to retire at the end of spring 26, so we are focusing on recruiting and training other faculty to take over this task.

**Provide any edits or updates to the prompts originally documented in the Practice Reflection section for Year 4.**

Faculty continue to regularly perform their own self evaluations in recognition that continuous self improvement is necessary to ensure continued effective support of our students in our classes. Contract faculty provide mentoring to our students as well as to newer contract faculty and department adjuncts, discuss challenges and collaborate to come up with solutions, support each other within and outside of the classroom, and frequently interact in social and collegial settings.

**YEAR 5 Updates (2026 - 2027)**

**Provide any edits or updates to the prompts originally documented in the Executive Summary section for Year 5.**

**Provide any edits or updates to the prompts originally documented in the Data Reflection section for Year 5.**

**Review Outcomes Report. Review the unit's outcomes assessment process for 2025 - 2026. Discuss connections to unit goals/action plans/resource requests.**

**Provide any edits or updates to the prompts originally documented in the Practice Reflection section for Year 5.**

# Unit Goals, Action Plans, and Updates

## Goal 11 - Purchase fluorescence microscope for Majors biology lab (Biol 210A)

**Unit Goal**: Acquire new equipment (fluorescence microscope) for the majors Biology lab (Bio 210A) lab to maintain excellence in curriculum, allow for innovation, and ensure quality instruction that is more in line with current cellular, molecular, and biotechnology practices.

**Goal Status**: Active

**Beginning Year**: 2025 - 2026

**Projected Completion Year**: 2026 - 2027

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 1:** Use technology to improve communication and accessibility across campus. (✓)
- **Community - Objective 3:** Build a culture of communication that is evidence based, race conscious, institutionally focused, systemically aware, and equity advancing (✓)
- **Community - Objective 4:** Remove barriers to equitable participation by developing, incentivizing and creating structures for all employees to engage in and design professional learning (✓)
- **Community - Objective 5:** Increase opportunities to be an asset and resource to the external community (✓)
- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Completion - Objective 4:** Support students' access to resources to mitigate the impact caused by technological and basic needs insecurity (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 4:** Establish a college-wide practice and schedule that addresses routine maintenance and renewal of equipment, facilities and technology to ensure access to adequate resources and better serve students (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Fill out BARC resource request form | |

# Unit Goals, Action Plans, and Updates

| Action Plans | Updates |
|---|---|
| **Action Plan Cycle:** 2025 - 2026 | |

## Goal 8: Hire new Contract faculty member to teach Major's and non-major's biology

**Unit Goal**: Due to the resignation of a current full time faculty member, we need to replace this position with a person capable of teaching our major's molecular biology course (Bio 210A), as well as the non-major's bio course (bio 107)

**Goal Status**: Active

**Beginning Year**: 2024 - 2025

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 1:** Use technology to improve communication and accessibility across campus. (✓)
- **Community - Objective 2:** Develop activities, spaces, and programs that support a sense of belonging with a focus on antiracism, historically minoritized groups, and inclusion. (✓)
- **Community - Objective 3:** Build a culture of communication that is evidence based, race conscious, institutionally focused, systemically aware, and equity advancing (✓)
- **Community - Objective 5:** Increase opportunities to be an asset and resource to the external community (✓)
- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Completion - Objective 4:** Support students' access to resources to mitigate the impact caused by technological and basic needs insecurity (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Pathways and Partnerships - Objective 3:** Increase community engagement, experiential learning, integrated career planning, and workforce training to prepare students for future careers (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 3:** Assess impact of prerequisites and corequisites on student success and revise curriculum, as needed (✓)

- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 3:** Increase student access and schedule efficiency by coordinating schedules among departments/disciplines (✓)
- **Stewardship - Objective 4:** Establish a college-wide practice and schedule that addresses routine maintenance and renewal of equipment, facilities and technology to ensure access to adequate resources and better serve students (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Submit FHP request. Form committee and prepare documents necessary for hiring.<br>**Action Plan Cycle:** 2024 - 2025 | **Submission Date**: 11/13/2025<br>**Action Plan Update**: Approval was granted. In progress with committee forming and plans to complete search in spring 2026, for fall 26 start date.<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: On Track |

### Goal 10 - Provide student- centered events to increase the feelings of inclusivity, faculty support, and increase STEM identity.

**Unit Goal**: Provide more opportunities for student-centered events during the semester to increase the feelings of inclusivity, belonging, faculty support, and increased STEM identity.

**Goal Status**: Active

**Beginning Year**: 2024 - 2025

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 2:** Develop activities, spaces, and programs that support a sense of belonging with a focus on antiracism, historically minoritized groups, and inclusion. (✓)
- **Community - Objective 3:** Build a culture of communication that is evidence based, race conscious, institutionally focused, systemically aware, and equity advancing (✓)
- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)

# Unit Goals, Action Plans, and Updates

- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Hold additional "Baked Goods with Biology" events during the semester; encourage faculty to hold more "student hours" (versus "office hours") in the collaborative study areas on the Biology floor; Schedule STEM lectures held in person (versus virtual) at a variety of times to encourage more direct student engagement, etc.<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025 | **Submission Date**: 11/13/2025<br>**Action Plan Update**: With the retirement of faculty, one on extended maternity leave, and multiple faculty experiencing challenges keeping up with the required job time commitment, we have not been able to keep up with the "Baked Goods with Biology" events that we started last year. Additionally, our STEM lecture coordinator was stretched so thin with her department chair duties (as well as others) that she is no longer able to find the time necessary to staff and schedule these lectures. We are hoping that with the addition of new faculty, we will have more people contributing to these additional events.<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: Barriers Encountered |

## Goal 5 - Funding for Anatomy Models - Utilization for DSPS/Student Retention

**Unit Goal**: Currently, faculty have challenges when trying to support DSPS students who require additional time and/or a distraction-free area for exams, and other students who require lab practical make-up exams due to a variety of valid reasons. This is due to the unavailability of additional anatomical models that can be used to offer exams in a room other than the anatomy rooms, which are utilized from 8am-10pm M-Th. If we had an additional full set of anatomical bones/models that are currently used for instruction, faculty could set up lab practicals that could be proctored through DSPS or by faculty in an unoccupied classroom. This is not currently possible and therefore is an issue with student equity, success and retention.

**Goal Status**: Active

**Beginning Year**: 2023 - 2024

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 2:** Develop activities, spaces, and programs that support a sense of belonging with a focus on antiracism, historically minoritized groups, and inclusion. (✓)

## Unit Goals, Action Plans, and Updates

- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Completion - Objective 4:** Support students' access to resources to mitigate the impact caused by technological and basic needs insecurity (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 3:** Increase student access and schedule efficiency by coordinating schedules among departments/disciplines (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Faculty will be requesting BARC funds for purchase of these additional anatomical models for testing purposes. Additionally, they will be looking for other potential funding sources.<br>**Action Plan Cycle:** 2023 - 2024 | **Submission Date**: 11/13/2025<br>**Action Plan Update**: All models except for 2 have been received. Follow up with the company indicates the last two models should be received by the Spring 26 semester.<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: On Track<br><br>**Submission Date**: 10/17/2024<br>**Action Plan Update**: BARC request was approved. Models have been ordered. We have received a few of them but the majority may take an additional 6-12 months to arrive.<br>**Update Year**: 2024 - 2025<br>**Action Plan Progress**: On Track |

### Goal 4: Acquire new and replacement equipment in Microbiology (Bio 205) lab

**Unit Goal**: Goal 4: Acquire new and replacement equipment in Microbiology (Bio 205) lab to maintain excellence in curriculum, allow for innovation, and ensure quality instruction that is more in line with current clinical and research fields.

**Goal Status**: Active

**Beginning Year**: 2022 - 2023

**Projected Completion Year**: 2025 - 2026

# Unit Goals, Action Plans, and Updates

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Fill out necessary request forms for BARC<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025, 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/13/2025<br>**Action Plan Update**: Biosafety hood still has not been installed. The "cabinet" is actually more like a fume hood but used to handle microbes and media aseptically. So, in not having it up and running it slows down our ILT's ability to make media and cultures to support our growing number of micro sections (we're up to 8 now).<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: Barriers Encountered<br><br>**Submission Date**: 11/13/2023<br>**Action Plan Update**: BARC request filled out and was approved. We received and are currently using the pipettor repeaters. The biosafety cabinets and refrigerators were purchased and received by the stockroom/shipping & receiving but due to staffing issues with facilities they have yet to be installed, therefore are not usable to us.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: Barriers Encountered |

## Goal 9 - Hire an Instructional Laboratory Technician (ILT) for Microbiology

**Unit Goal**: This new position would support our program by having the specialized training necessary for preparation of our microbiology courses, and allow us to increase the number of sections of microbiology that we currently offer.

**Goal Status**: Archived

**Beginning Year**: 2024 - 2025

# Unit Goals, Action Plans, and Updates

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 3:** Build a culture of communication that is evidence based, race conscious, institutionally focused, systemically aware, and equity advancing (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 3:** Assess impact of prerequisites and corequisites on student success and revise curriculum, as needed (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 3:** Increase student access and schedule efficiency by coordinating schedules among departments/disciplines (✓)
- **Stewardship - Objective 4:** Establish a college-wide practice and schedule that addresses routine maintenance and renewal of equipment, facilities and technology to ensure access to adequate resources and better serve students (✓)
- **Stewardship - Objective 6:** Develop a proactive hiring plan that includes a review of advertising, screening, and interviewing with a goal of establishing a diverse and competent workforce that is reflective of the student population and the local community (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Archived<br>**Action Plan:** Fill out CHP paperwork to gain approval for hiring prior to forming hiring committee and documents. Due to exorbitant amount of excessive workload issues, this is being tabled until a future cycle when it is possible to complete this effectively.<br>**Action Plan Cycle:** 2024 - 2025 | **Submission Date**: 02/02/2025<br>**Action Plan Update**: Due to exorbitant amount of excessive workload issues, this is being tabled until a future cycle when it is possible to complete this effectively.<br>**Update Year**: 2024 - 2025<br>**Action Plan Progress**: Barriers Encountered |

# Unit Goals, Action Plans, and Updates

## Goal 2: Develop a Human Biology course (lecture/lab)

**Unit Goal**: Goal 2: Develop a Human Biology course (lecture/lab) as a prerequisite for our allied health track students to increase student success in our 200 level classes (bio 230/235/205)

**Goal Status**: Archived

**Beginning Year**: 2022 - 2023

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Scholarship - Objective 3:** Assess impact of prerequisites and corequisites on student success and revise curriculum, as needed (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Create a FIG to evaluate feasibility of new course, including working with articulation office, reviewing other similar courses, and discussing with district colleagues.<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025, 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/07/2024<br>**Action Plan Update**: After meeting with colleagues in the Allied Health programs and our articulation officer, we realized that it was not feasible to create this course without losing the Biology 160 course as we would need to have at lease a 50% difference in course objectives to gain articulation and teach both courses. The biology 160 course is used as a prerequisite for many of the Allied Health programs, and it would not work for their accreditation to have a human biology course in its place. Our challenge is that our bio 160 course is extremely challenging as it is with a very low success rate historically, and modifying it to include the chemistry and molecular biology topics needed to provide an adequate base of knowledge to use as a prerequisite for the 230/235 and 205 classes would most likely lead to a lower success rate. Additionally, not all of the other colleges in our district teach this course, so getting their approval for it to be the sole prerequisite and remove the bio 107 as a prerequisite is not feasible. Therefore, we have decided to not proceed further with this goal.<br>**Update Year**: 2024 - 2025<br>**Action Plan Progress**: Barriers Encountered<br>**Submission Date**: 11/13/2023 |

# Unit Goals, Action Plans, and Updates

| Action Plans | Updates |
|---|---|
| | **Action Plan Update**: There were no FIGs available, but Anne Geller & Anar Brahmbhatt met with the articulation officer (Juliette Parker) and with her help found multiple similar classes at other community colleges to prove feasibility. Additionally, we met with Allied Health Directors Connie Renda (HEIT; HIMS) and Amanda Johnston (PTA) to discuss the continued need for the biology 160 course as it would be challenging to create a Human Biology course and make it at least 51% different from that existing course. However, we are currently unsure of the fate of the 160 course as it does not meet the new Cal-GETC requirements that are supposed to be in place by 2025.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: On Track |
| **Action Plan Status:** Active<br>**Action Plan:** Develop and launch course outline<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025, 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/13/2023<br>**Action Plan Update**: We are in progress but not yet at the stage to launch.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: On Track |

## Goal 3: Provide additional faculty support for research endeavors for our bio students

**Unit Goal**: Goal 3: Provide additional faculty support for research endeavors for our bio students. Many of them are pursuing careers in academia are greatly benefited from the opportunity to participate in real scientific studies. ESUs or release time would incentivize more faculty to get involved in serving as mentors and funds (relatively small) for materials would go a long way.

**Goal Status**: Archived

**Beginning Year**: 2022 - 2023

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Enlist a core group of faculty dedicated to research endeavors<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025, 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/18/2024<br>**Action Plan Update**: Although faculty (Bruckman) have been successful at receiving grant funding for some of these projects, the funding has been primarily to get more student participation and support. At this time, that will remain the focus so therefore faculty have recognized that without direct ongoing support specifically designated for faculty from the college, this goal is not actionable.<br>**Update Year**: 2024 - 2025<br>**Action Plan Progress**: Barriers Encountered<br><br>**Submission Date**: 11/14/2023<br>**Action Plan Update**: Daniela Bruckman has taken the lead in Biology to address these needs. She has received some money to fund student field experiences and research through an NSF grant that was lead by Jennifer Snyder and cowritten with Don Barrie, Katlin Choi and Daniela.. These funds meet some of the needs to mentor student research however, it is limited to the Bio 210B class.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: On Track |
| **Action Plan Status:** Active<br>**Action Plan:** Request/research areas of additional funding for support for faculty development and mentoring of student research projects<br>**Action Plan Cycle:** 2025 - 2026, 2024 - 2025, 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/14/2023<br>**Action Plan Update**: We have received some money to fund student field experiences and research through an NSF grant that was lead by Jennifer Snyder and cowritten with Don Barrie, Katlin Choi and Daniela Bruckman. These funds meet some of the needs to mentor student research however, it is limited to the Bio 210B class. Daniela Bruckman is also on the Mesa College Research Conference committee, and they are working to find more permanent sources of funding to incentivize and support student research at a larger scale.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: On Track |

## Goal 6: Acquire new and replacement equipment in the majors Biology lab (Bio 210A)

**Unit Goal**: Goal 6: Acquire new and replacement equipment in the majors Biology lab (Bio 210A) lab to maintain excellence in curriculum, allow for innovation, and ensure quality instruction that is more in line with current cellular, molecular, and biotechnology practices.

**Goal Status**: Completed

**Beginning Year**: 2023 - 2024

**Projected Completion Year**: 2024 - 2025

# Unit Goals, Action Plans, and Updates

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 2:** Develop activities, spaces, and programs that support a sense of belonging with a focus on antiracism, historically minoritized groups, and inclusion. (✓)
- **Community - Objective 4:** Remove barriers to equitable participation by developing, incentivizing and creating structures for all employees to engage in and design professional learning (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Completion - Objective 4:** Support students' access to resources to mitigate the impact caused by technological and basic needs insecurity (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 3:** Increase student access and schedule efficiency by coordinating schedules among departments/disciplines (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Active<br>**Action Plan:** Faculty will be requesting BARC funds for the necessary equipment.<br>**Action Plan Cycle:** 2023 - 2024 | **Submission Date**: 11/13/2025<br>**Action Plan Update**: Though they're not working that well, we did receive the scales. Faculty and ILTs are trying to calibrate them to be able to utilize. Both -80oC and -20oC freezers have been received now and are in use for Bio 210A.<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: Completed<br><br>**Submission Date**: 10/17/2024<br>**Action Plan Update**: BARC funding was approved. There have been issues with the purchasing of the equipment so faculty and ILTs are continuing to work with business services to complete the purchase orders to receive the equipment.<br>**Update Year**: 2024 - 2025<br>**Action Plan Progress**: Barriers Encountered |

# Unit Goals, Action Plans, and Updates

## Goal 7: Hire new Contract faculty member for Human Anatomy and Physiology

**Unit Goal**: We need to replace a retiring contract faculty member (Kevin Krown) who is capable of teaching both human anatomy and human physiology, in order to be able to maintain the number of sections offered and teach at the skill and level of rigor to maintain the highest quality of students going into allied health fields such as nursing, physician's assistant (PA), physical therapy, etc.

**Goal Status**: Completed

**Beginning Year**: 2024 - 2025

**Projected Completion Year**: 2025 - 2026

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Community - Objective 1:** Use technology to improve communication and accessibility across campus. (✓)
- **Community - Objective 2:** Develop activities, spaces, and programs that support a sense of belonging with a focus on antiracism, historically minoritized groups, and inclusion. (✓)
- **Community - Objective 3:** Build a culture of communication that is evidence based, race conscious, institutionally focused, systemically aware, and equity advancing (✓)
- **Community - Objective 5:** Increase opportunities to be an asset and resource to the external community (✓)
- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Completion - Objective 4:** Support students' access to resources to mitigate the impact caused by technological and basic needs insecurity (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Pathways and Partnerships - Objective 3:** Increase community engagement, experiential learning, integrated career planning, and workforce training to prepare students for future careers (✓)
- **Scholarship - Objective 2:** Evaluate and improve Diversity, Equity, and Inclusion practice in classroom environments, campus activities, departments, schools, and administrative units (✓)
- **Scholarship - Objective 3:** Assess impact of prerequisites and corequisites on student success and revise curriculum, as needed (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Scholarship - Objective 5:** Reduce costs associated with instructional materials to support the elimination of equity gaps (✓)
- **Stewardship - Objective 3:** Increase student access and schedule efficiency by coordinating schedules among departments/disciplines (✓)
- **Stewardship - Objective 4:** Establish a college-wide practice and schedule that addresses routine maintenance and renewal of equipment, facilities and technology

to ensure access to adequate resources and better serve students (✓)

| Action Plans | Updates |
|---|---|
| **Action Plan Status:** Completed<br>**Action Plan:** Complete FHP request form to gain approval for hiring. Create committee and appropriate tools for the hiring process.<br>**Action Plan Cycle:** 2024 - 2025 | **Submission Date**: 10/08/2025<br>**Action Plan Update**: We are in progress and hope to complete this goal by end of F25 semester. Committee was formed, applications reviewed and will be conducting interviews in the last week of October.<br>**Update Year**: 2025 - 2026<br>**Action Plan Progress**: Completed |

## Goal 1: Hire new contract faculty

**Unit Goal**: Goal 1: Hire new contract faculty to replace loss of Jennifer Carmichael in our department.

**Goal Status**: Completed

**Beginning Year**: 2022 - 2023

**Projected Completion Year**: 2023 - 2024

**Mapping**
Mesa College Strategic Plan: Roadmap to Mesa2030:

- **Completion - Objective 1:** Develop pathways that provide students with clarity about degree, certificate, and transfer requirements. (✓)
- **Completion - Objective 2:** Develop cross - functional teams that support student success and include integrated career and transfer counseling. (✓)
- **Completion - Objective 3:** Design and promote programs and services that intentionally target a reduction in equity gaps in completion outcomes (✓)
- **Pathways and Partnerships - Objective 1:** Develop and implement frameworks to create communities that can provide more targeted delivery of educational resources and support services. (✓)
- **Scholarship - Objective 4:** Expand the use of innovative and high-quality teaching, learning, and support practices that achieve equitable outcomes and increase student success (✓)
- **Stewardship - Objective 6:** Develop a proactive hiring plan that includes a review of advertising, screening, and interviewing with a goal of establishing a diverse and competent workforce that is reflective of the student population and the local community (✓)

# Unit Goals, Action Plans, and Updates

| Action Plans | Updates |
| --- | --- |
| **Action Plan Status:** Active<br>**Action Plan:** 1. Fill out necessary request forms for faculty hiring<br>2. With approval, form hiring committee<br>**Action Plan Cycle:** 2023 - 2024, 2022 - 2023 | **Submission Date**: 11/13/2023<br>**Action Plan Update**: Approval was granted for hiring and a committee was formed. The committee has completed the paper screening, and is preparing for interviews. We are hoping that there are qualified candidates to move forward to the president's interview at the end of this semester, and that a new hire will begin in the Spring 24 semester.<br>**Update Year**: 2023 - 2024<br>**Action Plan Progress**: Completed |