Instructional Annual Program Review and Planning Update Form Fall 2024

## BACKGROUND:

**Program review is an integral part of the campus planning process. As programs and areas monitor their progress on the current comprehensive four-year program review, changes in need and scope can be expected. This Annual PR Update form is designed to outline and request modifications to the current program review that occur between comprehensive four-year review cycles, as needed.**

**Examples of a requested change include new information such as action plans, outcomes modifications, personnel changes, technology needs, and capital expenditures requirements. As programs and areas monitor their progress on the previous comprehensive four-year program review, the form provides the basis to suggest a change in plans and processes to improve student success and institutional effectiveness.**

## SUBMISSION:

**Program:**

Health Sciences

**Principal Author(s):**

Bradley Dawson, Ph.D.

**Dean:**

Bridget Salzameda

**Submission Date:**

11/27/2024 2:14:46 PM

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# Part 1: Review of Data

## Use the data provided by the Office of Institutional Effectiveness (OIE)--[available in August 2024](https://fullcolledu-my.sharepoint.com/:f:/g/personal/dberumen_fullcoll_edu/Ejn54PAVVhJLqimOjiLWBBYBPkPdoZEFZxZtScvvyibo6A)--to review your program completion and success rates and compare them to the Institution Set Standards for course completion and success rates. Then, answer these questions:

1. **Where your program meets or exceeds the college-wide standard for completion and success, to what do you attribute your success?**

Most students enrolled in Health Sciences department course offerings are pre-nursing majors. The three courses we offer, ANAT 231 Human Anatomy, ANAT 240 Human Physiology, and MICR 262 General Microbiology, are all required for entry into nursing schools. Smaller numbers of students are interested in other healthcare-related careers - PA (physician assistant), PT (physical therapist), dental hygiene, nutrition and dietetics, personal training, pharmacy, optometry, even the occasional pre-med student. MICR 262 is also a minor component of the biotechnology program (Biology Department) so we occasionally see students enrolled in MICR 262 that are interested in those certificate and degree pathways. Our courses attract a diverse population of students, from the just-out-of-high school 18-year-old to post-baccalaureates interested in retraining for another career path. Since 75% or more of our students identify as pre-nursing majors we have designed our course offerings to work in a specific sequence: ANAT 231 (ideally preceded by a chemistry course, CHEM 101 or similar), followed by ANAT 240, and finally MICR 262. Once the pre-nursing student successfully completes these courses (and a few others offered by different departments) they apply to professional programs. Entry into a healthcare-related professional school (nursing, PA, PT, etc.) is very competitive, especially in southern California. The Health Sciences department views success in a manner similar to that of a CTE program – did we help the student qualify for and get entry into a professional program? This has been a challenging metric to measure; we have only anecdotal evidence that students who complete our program move on to higher achievement. A “where are you now?” follow-up might help us understand better how well our program is working for our students. We also offer a strong night program for our working students – at least one section of each course is offered starting at 5:30PM each semester. Our night students lack many important elements of campus support – more on this in Part 1 Section 2.

Looking at our success and retention data for the 2023/2024 academic year, we see that once a student successfully completes the introductory course, ANAT 231, success and retention improve markedly and are at or above the institutional set standards in almost all demographic groups (green). These data are very similar to success and retention numbers from the 2022/2023 academic year. The following are possible reasons for the improvement in success and retention we see in ANAT 240 and MICR 262 compared to ANAT 231:

a. ANAT 231 instructors spend a great deal of time and effort teaching students how to study for a challenging science course. This effort appears to pay off when successful students move on to ANAT 240 and MICR 262. Embedded tutors (embraced by our ANAT 231 instructors and present in almost all ANAT 231 sections this past academic year) also emphasize good study habits and techniques.

b. Lab skills learned in ANAT 231 translate to better success in the follow-up courses. For example, ANAT 231 looks at histological slides using a microscope. This skill positively impacts the more intense microscopy present in MICR 262 lab.

c. Both ANAT 240 and MICR 262 are designed to use the skills, concepts and knowledge developed in ANAT 231 (and CHEM 101 or equivalent) and build upon them. The Health Sciences department does this formally through the curriculum process, but also informally through department meetings and other interactions. For example, ANAT 240 focuses on the function of cells, tissues, and organs in the human body. In ANAT 231 students are introduced to the structures required to properly understand the functions. Department members who teach these courses regularly consult each other to look for opportunities for better coordination of topics covered in each class. The Health Sciences department has recently begun discussions with the Chemistry department to look for and enhance similar synergies between CHEM 101 and our three courses.

1. **Where your program does not meet this standard, please examine the possible reasons and note any actions that should be taken, if appropriate.**

Note to the PRPC: This format does not allow for embedded charts or graphs. It also appears that embedding links into the document is not allowed. This should be fixed for future PR forms.

Success and retention are well below institutional set standards for all demographic groups in ANAT 231 (orange), and for three groups (Black/African American, Filipino, and Latinx) in ANAT 240. These data are similar to data from the 2022/2023 academic year; no significant year-to-year trend, either up or down, is apparent. Obviously, success and retention rates in ANAT 231 are lower than we would like them to be, especially in the underserved demographic groups mentioned above. This is a problem the Health Sciences department is aware of and has been working on improving for many years. But it is a problem that is not unique to our program – getting past the first class on the path to a degree in nursing has long been considered the hardest step of the process. (For a general explanation see https://www.npr.org/sections/money/2014/09/02/344042884/the-toughest-class-in-nursing-school-is-the-first-one)

The Health Sciences department implemented a number of pedagogical and attitudinal changes in ANAT 231 over the past several years, and continue to hope that these changes will improve student achievement. Some of the ongoing efforts are listed below:

a. Adding more formative assignments in ANAT 231 F to create a more active learning classroom. While we have always had a few formative assignments in anatomy (dissections and in-class participation), we have included lab projects that allow students to exercise their creative potential. For example, one of our instructors uses a novel student-led video peer instruction project. Students make short videos explaining a specific structure, post it on the course website, then other students view and critique the video. Each student works on a different structure, first mastering then teaching that structure to the rest of the class. We plan to incorporate this or a similar project into all of our ANAT 231 F sections.

b. Support for tutoring, both the embedded Hornets tutoring and the tutoring center. After collecting data on the impact of embedded tutors have on our students, results show a statistically significant positive effect. Recruiting tutors from diverse demographic groups is our goal.

c. Offering open lab hours for ANAT 231 F students. Students from one instructor’s section are welcome to work quietly during another instructor’s lab section, providing improved access to class materials. We encourage students to take this opportunity for more learning and to develop mastery.

New areas we hope will have a positive impact on student learning, success, and retention we plan to incorporate in the future include but are not limited to:

a. Encourage students to use the new Student STEM Center, which should be fully operational for the Spring 2025 semester. We think this will provide a welcoming environment for students to interact with tutors, have access to lab materials outside of normal class hours, and just be part of the greater STEM community on campus. We are excited for the opportunities this resource will afford our students!

b. We are in the planning stages to offer Anatomy Boot Camps. These would be short instructor- and/or tutor-led workshops offered prior to or early in the semester, designed to prepare a student for the rigors of a challenging science course. Boot camps historically select for the most ambitious students, those who already have well-developed study habits and are just looking for that extra advantage to get an A. We are working on strategies that will allow the boot camp to reach students who need the extra assistance the most.

c. Many of the students who struggle in ANAT 231 are student-athletes. Student-athletes routinely complain of lack of study time to their anatomy instructors. While we employ embedded tutors in almost every ANAT 231 section, these might not work within the specific time constraints of our student-athletes. The Health Sciences department, along with the Natural Sciences division, will initiate a conversation with the Physical Education division about the possibility of having special PE tutors that will work with student-athletes on their schedule.

As mentioned above, our night students lack many of the resources available to day students, possibly contributing to lower levels of student learning, success, and retention. Offices/services not available to night students include:

• Health Services - https://health.fullcoll.edu/

• Disabled Student Services (DSS) - https://dss.fullcoll.edu/

• Food service except for vending machines

• Veteran Resource Center - https://veterans.fullcoll.edu/

• And we recently discovered bathroom doors being locked at 9PM, over an hour before our night classes are finished on the 2nd floor of the 400 building. We are working with the Division Dean to get this problem solved. But it is indicative of the lack of services overall for our night students.

While it is beyond the prevue of the PRPC to promote and/or fund extending the hours for these services, the Health Sciences Department hopes that by calling attention to the problem in the PR process, some positive change may result. Our night sections generally have lower success and retention rates than our morning and afternoon sections (personal observation supported by several other night instructors) – part of the problem may be due to this lack of campus support.

1. **Compare your data analysis in questions 1 and 2 to the review of data in your 2023 Annual Program Review update (available on the** [**Program Review and Planning Committee**](https://committees.fullcoll.edu/program-review/) **website). Are there significant changes? Do you notice any patterns from year to year?**

As discussed above, no significant changes in our program success and completion rates were noted. The numbers jump up and down a bit year to year but no trends are apparent.

The biggest change to the Health Sciences program has been the loss of 3 full-time faculty members in a period of 2 years. One to retirement, one to take a job closer to home, and the last, tragically, was lost to cancer. We are currently offering fewer sections than usual. This has a negative impact on access to courses in their pathway. This is forcing some students to look elsewhere for the course, or to take the course out of the proper sequence. For example, many students this past semester jumped directly from ANAT 231 into MICR 262 because of a lack of ANAT 240 offerings. Taken out of sequence like this MICR 262 is a more challenging course and may lead to a decline in student achievement. We have tried to use adjunct faculty to alleviate some of the impasse in course offerings but that has only helped a little. We were just informed we get to hire another full-time faculty member – a new hire will mean more sections, allowing students to follow the proper pathway through the program. We hope to hire an additional full-time faculty member in another year or two so we can offer a full slate of courses, increase access for our students, and inject new ideas to promote student learning, success, and retention.

# Part 2: Additional Resource Request Reasoning and Support

**We have reviewed our most recent self-study and have not identified any significant changes that necessitate resource requests for the upcoming academic year.**

**We have reviewed our most recent self-study and have identified significant changes that necessitate additional resource requests.**

**For programs that have identified significant changes that necessitate additional resource requests, answer the following questions for each separate resource request:**

1. **Briefly describe your resource request.**

Another full-time faculty member to teach ANAT 231 and other courses in our program.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

The pre-nursing pathway, which includes 3 courses in the Health Sciences department, is severely impacted. Students cannot complete the 3 courses in sequence at Fullerton College, and have resorted to either taking them out of sequence or taking the courses at other colleges. The pool of qualified adjunct ANAT 231 instructors is small. We will be hiring a new faculty member to start Fall 2025 but will need another to replace the 3 full-time faculty members we recently lost.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

Improved access to our courses, more students moving successfully through the pre-nursing major in a timely fashion, more degrees and certificates awarded.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

The Health Sciences department had 5 full-time faculty Fall 2022. Since then one faculty member retired, another left to take a position closer to home, and a third passed away from cancer. 5 faculty to 2 faculty in a short period of time.

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

One of the faculty losses was anticipated, the other two were not. This was not part of our last self-study.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel | Faculty |
| Facilities |  |
| Supplies |  |
| Computer Hardware |  |
| Computer Software |  |
| Training |  |
| Other |  |
| **Total Requested Amount:** | Full-time faculty salary |

|  |
| --- |
| **Is the funding requested ongoing or one-time funding?**  Ongoing funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  No |