7. **Continue to promote and strengthen the Physics seminar series.** This seminar series serves as a means to strategically grow our number of majors but also provide a sense of community among all Physics enthusiasts and everyone interested in science. For instance, the seminar series will be held during the University Hour, but we will need to monitor and assess the impact on attendance and the availability of outside speakers.

8. **Continue to provide undergraduate research experiences for all interested majors, and other STEM majors where possible.**

9. **Invest in upgraded and state-of-the-art laboratory and hands on learning equipment for teaching and research.** Furthermore, the program needs to develop a plan to improve the storage and proper use of lab and demonstration equipment.

10. **Monitor and support the newly designed Astronomy minor to assess the possibility of**

A. Progress Toward Five-Year Review Planning Goals

Report on your progress toward achievement of the 5-Year Plan. Include discussion of problems reaching each goal, revised goals, and any new initiatives taken with respect to each goal.

1. **Implement, assess and revise as necessary the semester courses offered by the Physics program.**

   In the 2019-2020 AY, we will be undergoing re-certification for all of the departmentôs GE area B1 and B3 courses (along with any accompanying overlays). This includes PHYS 104, 105, 106, 107, 108, 115, 125, 126, 135, 138 and 139. This turn-around seems extremely quick as these course were just implemented last year 2018-19, our first year under semesters, and some of these courses have actually not yet been offered/taught under semesters, making it impossible to show that learning outcomes were achieved. However, this gives the department an opportunity to reflect on and revise many of our semester courses.

2. **Develop a department**

The number of Physics majors continues to be close to the national average for undergraduate Physics programs. The Physics major continues to be one of the smaller programs on campus. This is neither surprising nor unusual. In fact, in 2016, the average number of upper division students enrolled in Physics programs nationwide, including both B.S. and Ph.D. granting institutions was 34.8 (www.aip.org/statistics). This data is from the 684 institutions, of a total of 750, that reported their data. This average is considerably lower, only 21.3, when considering only the 508 B.S. granting institutions that reported their data. At CSUEB, in Fall 2019, according to ñBay Advisor,ò our number of upper division students was 33, well over the national average.

However, we still need to make a coherent plan to promote sustainable and measured growth. Within the department discussi

B. Program Changes and Needs

Report on changes and emerging needs not already discussed above. Include any changes related to SB1440, significant events which have occurred or are imminent, program demand projections, notable changes in resources, retirements/new hires, curricular changes, honors received, etc., and their implications for attaining program goals. Organize your discussion using the following subheadings.

Overv

II. **SUMMARY OF ASSESSMENT** *(suggested length of 1-2 page*

We have already reached out to the Chair of Kinesiology to discuss the possibility of including the Physics 125-126 sequence as part of the official roadmap for students interested in earning the Kinesiology degree who are looking towards a graduate degree in Allied Health. There are currently over 1200 Kinesiology majors here at CSUEB, though many are transfer students who would likely not need to take the course. However as the Chair indicated, likely 70% of Kinesiology majors express an interest in Allied Health graduate programs. As such the specific inclusion of the Physics sequence on the Kinesiology roadmap could result in a large increase in our introductory Physics enrollment.

B. Request for Resources *(suggested length of 1 page)*

1. Request for Tenure-Track Hires: provide evidence from trends provided

We are not requesting a tenure-track hire for the upcoming academic cycle. We are currently have a search underway to hire a new Physics faculty member into our department for the start of the Fall 2020 Academic Year. As per our five-year plan, we had anticipated needing two new hires during the subsequent five years, i.e., 2018 ï 2023, so we are happy to be half way there.

2. Request for Other Resources

Of greatest concern to the Physics Department is the quality of the hands-on lab experience for students both in the introductory Physics courses and the upper division courses. A2E2 fees, in particular the EIRA/ECL and IREE allocations have been used by our department to support the hands-on lab experiences. However, the funding has been sporadic and it is hard to make long-term plans without a consistent funding mechanism. We would strongly encourage that the administration acknowledge the higher cost of lab based curriculum and provide more funding to the college of Science which has a high proportion of laboratory based courses.

It is also strongly hoped for that the administration try to understand the lengths to which the Physics faculty go in order to ñmake things workò in the poorly designed and woefully outdated/inadequate Science building. Historically the Science building, along with A&E, was one of the first buildings on campus. The plans were borrowed from another, pre-approved building from another CSU. The building is ill-suited for having offices or research labs for the faculty. The heating is inadequate and there is no air conditioning. Just this past week (September 2019) a student fainted in our lab classroom due to the excessive late-September heat wave that left rooms in the Science building at a stifling 80+ degrees Fahrenheit. We would strongly encourage our administration to make upgrading the Science building, classrooms, offices and lab spaces and the accompanying infrastructure a high priority.