**Disproportionate Teaching Load:** Science faculty continue to teach a disproportionately larger load than other faculty on campus. Science faculty have a contracted base 18 load for labs while many of our peers in other disciplines have base 15 load. A historical fiction is that teaching labs is easier than lecture. The grading of weekly lab reports, alone, exceeds the allocated prep time given for a laboratory class. The disproportionate loading of science faculty adversely affects quality of instruction and student access to our instructors. Physical Sciences instructors spend significantly more time preparing for laboratory classes than for our lecture classes. This gives us less time to prepare instruction for the students we serve. It makes us less accessible to the students we serve. It negatively impacts our ability to perform institutional responsibilities and our ability to keep the information in our courses current. The College should act on supporting all science faculty with a change to base 15 load.

**Insufficient Department Chair Release Time:** Physical Sciences is challenged by limited release time to the department chair. The Science/Math release time resource does not allow the physical science chair to truly have release time. As it stands, being department chair in physical science means that you are forced to teach an overload.

**Release time for Planetarium Director:** In 2007, we identified a need for release time for the Planetarium Director. This need still exits and will become even more critical when we open the new planetarium in 2018.

The Physical Science department is affected by any State or Federal regulation that impacts their financial support of 4-year and 2-year Colleges. Any change in funding ripples down to the Instructional Self-Study 2015 – 2016 Program Review Page 4 of 23 Instructional program level, affecting the ability of our department to effectively enact its plans and achieve its goals.

We have been successful in offering transfer preparation courses and general education courses that are in line with the College’s Educational Master Plan. Also, we have had success in offering dynamic, hands-on laboratory experience to our students in preparation for the university or the work force.

**Closing the Achievement Gap**

What suggestions do you have that would support the effort to close the achievement gap in your program? What suggestions do you have that would support the effort to close the achievement gap at an institutional level?

Physical Sciences laboratory classes are designed to give students hands-on experiences with equipment. Educational research has shown that students who
traditionally belong to an under-represented or marginalized group (groups often based on socio-economic, cultural, ethnic, or gender backgrounds) receive great benefit from having more exposure to hands on activities and tutoring when they have questions and run into problems.

To close the achievement gap, Physical Sciences would benefit greatly from hiring additional hourly course/lab teaching assistants for each course section (please see the "Resource Allocation Supplemental Information" section for more details). As per the West Valley-Mission Community College District job description for a laboratory technician, these assistants would:

- provide learning opportunities in a practical setting in which students perform exercises and assignments in biology, physics, chemistry and other designated science areas.
- provide instructional guidance and assistance to individual and small groups of science students;
- reinforce concepts, techniques and practical applications presented by the instructor.

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**Resource Allocation Requests**

**Resource Allocation Request Table**

<table>
<thead>
<tr>
<th>Resource Name</th>
<th>Resource Type</th>
<th>Requested Amount</th>
<th>Program/Institutional Goal</th>
<th>Specific Information Regarding Proposed Expense</th>
<th>Purpose/Action/Expected Measurable Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Aid, Part-time Hourly</td>
<td>Part-time Hourly</td>
<td>14000</td>
<td>&quot;Improve the quality of laboratory experiences&quot; &quot;implement project-based learning activities &quot; (College Goal #1) Improve student</td>
<td>Additional hourly instructional aides to adequately support day and evening laboratory sections.</td>
<td>Support increase in course offerings. Support improved student learning experience. Support the set up, maintenance, and use of laboratory equipment.</td>
</tr>
</tbody>
</table>