

## Science 2011-12

### Supporting Enrollment Growth, Innovation, and Quality: Faculty and Staff positions

#### Summary:

Sustaining excellence and future enrollment growth of instructional programs in Science depends upon increasing contracted faculty and classified staff to provide stable support for student success. This initiative describes the critical needs in Science for:

1. full-time faculty in A&P, EES, Physics, Energy Management and Water Conservation; and to replace retiring faculty
2. full-time support staff, in Life Science support and the SRC
3. support staff for Physics, to increase use of equipment and materials among part-time faculty
4. recurring technology support, moving existing Tech Fund supported positions to the General Fund.

#### Description

This initiative describes the need for additional full-time faculty and support staff in Science. Overall we are requesting five new full-time faculty for FY12 and two additional faculty for FY13. This is not including replacements for faculty who are soon to retire. Costs are offset by the current salaries of the part-time faculty teaching the roughly 45 sections that the full-time faculty would teach. We are also requesting increased instructional support staff; and moving technology support staff to a recurring budget status in the general fund.

With increasing enrollments in credit courses at Lane, the Science division has reached its maximum capacity. Since FY05-06, we have increased sections by approximately 20%, have increased registrations by 41% and increased in FTE by 37%. Enrollment in FY10 increased over 9.5% in Science, from approximately 1066 FTE in FY09 to 1167 FTE in FY10. We have added another 24 sections to the FY11 schedule, an increase of 6.1%. This has occurred with no new permanent staffing, despite the difficulty in finding qualified part-time faculty. For FY11, we have continued to add sections. All areas of Science have experienced significant enrollment growth!

Key points:

- Among the transfer courses, the ratio of sections taught by PT to FT was about 60%/40% in FY08, and was 68%/32% in FY10. The ratio for FY11 will be more extreme. In EES 100% of classes are taught by PT faculty.
- Among all courses in Science, the amount of FTE generated by PT vs. FT faculty shifted from about 55%/45% in FY08 to 68%/32% in FY10.
- In order to staff enrollment growth, we made extensive use of the faculty overload MOU for FY09 and FY10.

Balancing growth against resources is extremely difficult. Growth in 200-level Physics and adding 100-level Physics sections to accommodate increases in the NRG management program has resulted in the need to hire new part-time faculty. EES has NO contracted faculty member currently employed. EES faculty are extremely active in developing new curricula and in maintaining the high quality of the course offerings. The expansion in the NRG management program and the new Water Conservation Technician program with only one permanent faculty in that area creates is not sustainable. While temporary full-time faculty has been added, the programs need committed, contracted faculty in order to thrive. Finding qualified faculty who will teach only a few sections a year is becoming increasingly difficult. Full-time faculty members are taxed to mentor new faculty and oversee curricular standards. We simply cannot continue to staff for growth using PT faculty.

The lack of lab support in Physics has reached a critical stage. Currently we are not providing sufficient lab instruction in our physics and astronomy courses. The Physics discipline is seeking a permanent solution to this problem to ensure that students receive the quality of instruction that is promised in the course descriptions and credits.

In addition, adding lab courses places increased demand for materials and laboratory prep work and clean up. The lab support staff for science has not increased since FY04 to meet the growth in variety and number of sections being offered each term. In that time, Science has grown from 285 sections (excluding NRG/WATR/SUST) to 400 sections this year, in an attempt to meet growth in enrollment. Since nearly every class is a laboratory class, having dependable lab support staff is crucial. Finally as more students use study materials and equipment, wear and tear increases. Support staff are challenged to maintain equipment and to replace materials and supplies used in multiple sections of courses. Staffing with part-time, time sheet workers is not sustainable and results in frequent need to re-hire and re-train as competent workers get permanent jobs elsewhere.

Increased enrollments and higher numbers of part-time faculty place additional burdens on the Science Resource Center staff. The SRC Staffing initiative is based on long recognized needs that existed well before Unit Plans were done, and these needs are documented annually in the Science Division Unit Plan.

This initiative continues many that were started years ago. For example, over the last several years, the A&P discipline has made excellent use of Carl Perkins funds to support student learning in the prerequisite courses for Health Professions programs. Perkins funds have provided instructional materials which depend on the SRC for housing, maintenance, preparation, and/or signing out to students. The initiative would support student learning in Science by providing an Instructional Specialist (1.0 FTE) who would assist SRC operation in the following ways:

- supervise SRC users, employees, and students workers
- tutor students, train tutors, administer/proctor exams; facilitate student study groups
- provide technical support for computer-based learning activities
- allow extended hours during evenings and weekends
- maintain and inventory instructional materials and equipment
- assist students with discipline specific content material and the use of discipline specific tools, models, laboratory materials, and/or software.

## Questions and Answers

**How is the initiative linked to the Unit Plans most recently submitted?**

- 1. How does it continue the achievement of those goals?**
- 2. If this is a continuation of an initiative started last year, make sure that relationship is clear.**

**How is this initiative linked to the efficiencies and productivities plans you had last year?**

- 1. How does it continue the achievement of these plans?**
- 2. If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.**

This initiative supports all of Lane's strategic directions by supporting instruction, the core work of the college. This initiative continues the achievement of the two themes in the FY2011-12 Science Division Unit Plan, which have been consistent over the past three years.

A) Optimizing sustainable access for students and options for quality learning

B) Optimizing the curricula and resources we already have.

Specific goals and activities are:

11. Provide adequate, stable staffing for instructional programs.

12. Provide adequate, stable staffing for instructional support.

We are all aware of the severe constraints for replacing faculty, staff and management vacancies; and for adding new positions. Nonetheless, some positions will be hired over the next two to three years. As the college considers how to prioritize hiring decisions, here are some factors to consider regarding adding faculty and staff in the Science Division. These factors match the Faculty Vacancy Rationale criteria used to select positions to replace.

- Accreditation standards are not being met in all disciplines in Science due to lack of FT faculty; and articulation with health professions programs, UO and OSU are jeopardized by lack of FT faculty. For example, we currently are below standards for lab activities in physics and astronomy.
- The FT/PT ratio for the Division as a whole is extreme. Over two-thirds of all sections are taught by PT faculty. In some disciplines, this number is as high as 100%.
- Many career technical programs have prerequisite courses in the sciences, especially those in health careers. We also support one of the fastest growing career pathways in the nation in the Energy Management options and Water Conservation Technician.
- FT faculty provide mentoring, scholarship support, guidance and leadership in innovative curriculum, all in support of student learning and success.
- Capacity rates, course completion rates and course success rates in Science courses are consistently high, with many courses have rates of well-over 100%. We cannot continue to grow using PT faculty only.
- The transfer/AAOT portion of the Science Division is a medium cost program. Costs per FTE for transfer credit programs are typically lower than for career technical programs.
- Direct costs per FTE for science courses are less than the college average direct costs per FTE.
- Revenues per FTE for science courses exceed the direct costs per FTE.
- Adding FT faculty supports fiscal sustainability by reducing administrative burden of PT faculty; increasing curriculum consistency and currency; and supporting the other leadership roles of faculty.
- Majors in any science or engineering major need to take multiple science courses and other requirements in preparation for transferring to four-year colleges. A strong Science Division supports the fiscal sustainability of the college as a whole.

In other words, increasing the capacity of the Science Division to maintain excellence and to grow enrollment is good for the college's long term fiscal sustainability. We provide critical course work to support numerous career technical programs; and to prepare students for careers in science and engineering.

This initiative is linked to almost every initiative, revenue enhancement, efficiency, and productivity plan that has been proposed by the Science Division over the past several years. Please see the Division's 2012 Unit Plan for details about the growth in all areas over the last five years. Adding full-time faculty positions in a variety of disciplines will ensure the quality and fiscal sustainability of our programs.

#### **Describe the resources needed:**

Section III of the Science Unit Plan for FY12 lists a number of identified staffing needs. We are presenting these particular needs as an initiative in order to highlight the urgency and importance of providing adequate staffing to support student retention and success.

Where applicable, the costs of full-time staff have been figured as the **net new costs** to the college. This method accounts for current part-time faculty or 04 staff, and offsets the projected costs of contracted faculty or permanent classified staff. Converting existing funding for part-time and temporary staff into full-time personnel does more than buy more hours for the college workforce. Contracted, permanent faculty and staff engage in sustaining all aspects of the learning environment. For faculty, students benefit from having teachers who are committed fully to the learning program and who are available for office hours, study sessions, and other student support activities. The division and college benefit from having more people to serve on critical committees and work groups. For support staff, the students benefit from having a well-trained person, consistently managing and maintaining learning resources. The division and college benefit from increased efficiencies and productivity of a well-trained work force, committed to the mission and values of the College.

#### **Full-time faculty in Science Disciplines**

MS Degree, Step 7, \$52,732 Salary; 29,266 OPE [.555], Total: \$81,998

Ave PT Fac Step 23, 9 sections, 4 cr, \$42,684 Sal; 13,317 OPE [.312]; Total: \$56,001

- Net New Costs, MS level: \$25,997

PhD Degree, Step 17, \$63,389 Salary; 35,181 OPE [.555], Total: \$98,570

Ave PT Fac Step 23, 9 sections, 4 cr, \$42,684 Sal; 13,317 OPE [.312]; Total: \$56,001

- Net New Costs, PhD level: \$42,569

**Full-time support staff in Life Science support and the SRC to support student retention and success**

FT Life Sci: L8,S1, \$28,345 Salary; \$15,731 OPE [.555]; Total: \$44,076

Timesheet 1039 hr @ 13.63/hr: \$14,162 Salary; \$4,419 OPE [.312]; Total: \$18,581

- Net New Costs, Life Sci: \$25,495

FT SRC: L8,S1, \$28,345 Salary; \$15,731 OPE [.555]; Total \$44,076

Timesheet 850 hr @ 13.63/hr: \$11,586 Salary; \$3,615 OPE [.312]; Total: \$15,201

- Net New Costs, SRC: \$28,875

**Full time laboratory support staff for Physics, to increase use of lab equipment and materials in Physics and Astronomy courses.**

FT Support Staff, L8,S1, \$28,345 Salary; 15,731 OPE; Total: \$44,076

- New Costs, Physics Support: \$44,076

**Recurring technology support, moving existing Tech Fund supported positions to the general fund (also presented in the Tech Fund request)**

One 1.0 FTE Information Technology Technician @ LA,S19, \$46,761 Salary plus \$25,952 OPE [.555], Total: \$72,713

Recurring Costs, Tech Support: \$72,713

**What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.**

Measurable outcomes from this initiative will be:

- Enrollment growth in Science, with quality support services for student retention and success (FTE numbers, IRAP)
- 10% increase in student retention from term to term, due to student engagement strategies carried out by full-time faculty and increased SRC instructional support staff.
- 25% more faculty work on Division initiatives, student retention and success strategies, curriculum maintenance and innovation, and mentoring of part-time faculty.
- 25% more faculty service from Science faculty on college committees.
- Significantly more consistency and best practices in curriculum for Science disciplines (student evaluations; faculty self-report)
- Improved service to students from SRC staff. (student surveys)
- Improved service to faculty from lab support personnel. (faculty surveys)
- Increased use of laboratory activities in Physics courses. (student evaluations; faculty self-report)
- Increased access to learning materials (extended hours in SRC; student use of resources)
- Increased access to testing services for online courses (extended hours in SRC)

- Support, collegiality, engagement, and success in science courses among students preparing for high-skill, high-wage, and high-demand occupations in science and related fields (measured by student surveys; tutoring hours logged in SRC)

**Department Priority:**

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**Unit Resources:**

Priority ranking for this initiative was determined by SAC members drawing numbers randomly. All the initiatives are valuable to the Division and to the proposing disciplines; all have the support of the Division.

Despite the priority number (randomly assigned), this initiative is a very HIGH priority for the Division. Unfortunately, the Unit Planning process does not link to college budget planning. This initiative reflects the intrinsic costs of providing quality science education for our students. The initiative represents need for full-time faculty and support staff in a number of areas, plus part-time staff in technology support. The Tech support staff needs are also in the Tech Fee request. Science recommends that these expenses move from non-recurring Tech Fund support to a line item in the Division's budget. Funding for staffing is necessary to maintain excellence and grow to meet increased demands for Science courses.

Science will support this initiative thru screening committees for new positions, ongoing professional development for new and existing staff, and providing a welcoming and supportive work environment.

Without additional funding requested by this initiative, continued growth in science courses and services cannot happen. All of the existing resources of the Division are working at full capacity to try to meet demands for lab support, student support, and curriculum management. It is clear that there is an urgent need for additional staffing to simply maintain the level of service and course offerings currently provided by the Division.

**Funding Request: Carl Perkins**

**Funding Request: Curriculum Development**

**Funding Request: Technology Fee**