UNIT REPORT

Forensic Science, Department of
Assessment Plan Summary

Forensic Science, Department of

Enhance and Develop Academic Program Quality

Goal Description:

Enhance and develop academic program quality and scope by implementing a new doctoral degree in forensic science and sustaining its growth during the first five years.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Sustain the Recently Implemented Doctoral Program

Performance Objective Description:

Sustain the recently implemented interdisciplinary doctoral program in forensic science.

RELATED ITEM LEVEL 2

Implement and Sustain the new Doctoral Program

KPI Description:

Maintain enrollment projections for the newly implemented doctoral program in forensic science.

Results Description:

To date the department has maintained enrollment projections for the PhD program. In the second year of the program (AY 16-17), a total of seven new doctoral students were accepted (six were projected). During this academic year we exceeded our enrollment projections (117%) to offset slightly lower enrollment (83%) last year. The cumulative head count of full time doctoral students now stands at twelve (100% of projected). Of the seven new students this year, four were internally recruited from the Master's program and three external applicants were accepted.

Doctoral stipends ($26,000) were provided to each student and once again, the department was successful obtaining external support (Graduate Research Fellowship in STEM) from the National Institute of Justice (NIJ) to fully fund two of the new doctoral students. To date, five of the twelve doctoral students are currently funded through the NIJ Graduate Research Fellowship program.

Attached Files

Enrollment Projections - PhD

RELATED ITEM LEVEL 3

Sustaining the new Doctoral Program

Action Description:

The Department of Forensic Science has demonstrated success with respect to meeting enrollment projections for the recently implemented doctoral program and has been successful obtaining external funding to support both the doctoral stipends and costs associated with program delivery (e.g. scientific consumables). Ongoing institutional support is critical to ensure its success. A new faculty position during this academic year was much needed and will reduce burnout among faculty. Costs associated with scientific equipment (capital outlay and repairs) and physical (laboratory and office) space within the department continue to be our most immediate needs. Both issues have to potential to stifle growth if not addressed in the very near future.

Excellence in Teaching, Research and Service

Goal Description:

Sustained excellence in teaching, research and service at the department level.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

FES

Performance Objective Description:

All faculty will engage in research, teaching, and service.

RELATED ITEM LEVEL 2

Faculty Evaluation System

KPI Description:

Faculty are evaluated per University guidelines on research, teaching, and service. Faculty must be actively engaged in sustained efforts that demonstrate effective research (evidenced by publications and supervision of student-directed research), teaching (evidenced by

student evaluation scores on IDEA that meet department expectations), and service (evidenced by documented service activities to the department, college, university, and academic community at large). 100% of faculty in the department will meet or exceed the minimum expectations in all three areas.

Results Description:

The standardized Faculty Evaluation System (FES) matrix utilized by the College of Criminal Justice showed that all faculty performed at or above the minimum expectations in terms of research, teaching and service. Faculty within the department of forensic science have also been successful with respect to external funding. During this academic year a total of seven new awards were received from the National Institiute of Justice, totaling more than $438,000. This excludes ongoing, multi-year awards already in place.

In addition to faculty success related to research, faculty within the Department of Forensic Science are engaged scholars within their respective disciplines and participate on numerous advisory boards, commissions and hold elected positions at the state and national level.

Although the department demonstrates overall success with respect to externally funded research, clustering of graduate students is an ongoing issue. The department has struggled to distribute graduate student research more evenly among existing faculty. Currently 33%of all graduates are employed in forensic toxicology (41% in DNA, 26% all other forensic disciplines), which has been supported by only one faculty member. During AY 16-17 a new growth position was added in forensic toxicology which will alleviate current constraints related to supervision of toxicology research within the department.

Significant progress was made during this year transitioning students into previously underrepresented disciplines (e.g. trace/physical evidence). Following the addition of a new faculty member specializing in trace/physical evidence last academic year, two additional NIJ grants were funded, and the number of students electing to work in this discipline was increased (at both the MS and PhD level).

Attached Files

DFS New External Grants AY 16-17

RELATED ITEM LEVEL 3

Faculty Evaluation

Action Description:

The administra on will assume a more proac ve role as it addresses clustering issues, in an effort to prevent burnout and ensure a more equal distribu on of the workload and responsibility associated with graduate student supervision. Increased emphasis will be placed on the quality of the student research experience (including, but not limited to mentoring, manuscript prepara on and availability/ accessibility of faculty to students), all of which contribute to clustering.

The department Faculty Evalua on System (FES) matrix was not updated in lieu of possible college-level updates during the next academic year. Graduate faculty expecta ons, commitment to improving the quality and delivery of the curriculum, and the student research experience will be emphasized in the new FES matrix.

Forensic-Related Careers or Advanced Graduate Studies

Goal Description:

This performance indicator is a measure of post-graduate success with respect to employment in the area of forensic science or the pursuit of research or an advanced graduate degree.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Postgraduate Success

Performance Objective Description:

Graduates will be employed in the area of forensic science or will pursue advanced graduate studies or research.

RELATED ITEM LEVEL 2

Job or Advanced Program Placement

KPI Description:

The number of graduates that are successfully employed in forensic careers or pursue advanced degrees or full time research within 12 months of graduation.

Results Description:

The employment status of forensic science graduates is surveyed within twelve months of gradua on. In 2017, the survey of 2016 graduates indicated that fourteen of the sixteen graduates (88%) were successfully employed or pursuing advanced degrees. Although this is slightly lower than the ten-year average of 94%, the Department of Forensic Science has a strong performance as it relates to postgraduate success.

The department puts forth significant effort to track its graduates over me. T o date, the majority of SHSU graduates are employed in DNA (41%), Toxicology (33%), Controlled Substances (12%), Firearms (6%) and Trace. Evidence (4%). Approximately two-thirds are employed in the public sector, working in government forensic laboratories at the federal, state, county, or city level. Others pursue careers in the private sector or in research.

Attached Files

Postgraduate Success - July 2017

Increase Enrollment

Goal Description:

To increase enrollment via recruitment and retention of qualified and motivated students.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Increase Enrollment

Performance Objective Description:

To increase enrollment via recruitment and retention of qualified and motivated students.

RELATED ITEM LEVEL 2

Enrollment and Retention

KPI Description:

Enrollment numbers and retention rates of students accepted into the Master of Science in Forensic Science annually.

Results Description:

During this academic year there were a total of 27 full time MS students enrolled in the program. This represents a 10% decrease compared with the previous academic year. Of the fourteen second year MS students, six transferred into the doctoral program and the remainder graduated. There was no attrition. Retention rates during AY 16-17 were 100%.

RELATED ITEM LEVEL 3

MS Enrollment

Action Description:

Due to increased emphasis on forensic science reform at the national level and public interest, the number of FEPAC-accredited programs continues to grow. Other competing institutions have also developed doctoral programs in forensic science, increasing competition for high quality students. The department must improve its competitiveness with respect to assistantships and scholarship support to maintain healthy enrollment. It must also maintain marketing and outreach efforts and participate in high visibility marketing and recruitment events an student related activities at national meetings, such as the American Academy of Forensic Sciences.

RELATED ITEM LEVEL 2

Graduate Research Assistantships

KPI Description:

Resources available to support graduate assistantships and scholarships at the MS level.

Results Description:

Historically the department receives ten graduate assistantships and scholarships for MS students annually ($12,000 per student). This allows assistantship offers to be made to approximately one third of the incoming students annually, which is not competitive with other FEPAC-accredited programs.

The acceptance rate (% of students that accepted offers) for students admitted during Fall 2016 was only 54%, despite significant recruitment efforts. Moreover, four of the five top students offered graduate assistantships declined our offer in Fall 2016, citing more competitive stipends at other institutions.

RELATED ITEM LEVEL 3

Graduate Assistantship Support

RELATED ITEM LEVEL 3

Graduate Assistantships (MS)

Action Description:

The department must continue to advocate for more competitive stipends and an increase in the percentage of students funded (from 33% to 100%) during the next budget cycle. Failure to do so will impact MS enrollment, impede our ability to attract high quality students, recruit doctoral students from within, and our competitiveness with respect to external funding.

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

The Department of Forensic Science will continue to align its Strategic Operational Plan with much-needed resources to support graduate education in forensic science. Specifically, institutional support to meet the needs of the recently implemented doctoral program must be addressed, related to capital equipment, repairs, scientific consumables and physical space. The Department of Forensic Science must also address graduate student financial support within its master's program in order to remain competitive with other programs and attract high quality students. Finally, "clustering" or the unequal distribution of students among research faculty will be evaluated to determine its impact on productivity, morale, publication rates and faculty retention.

Update of Progress to the Previous Cycle's PCI:

The Strategic Operational Plan is currently aligned with critical resource needs related to graduate student support, capital equipment, repairs, scientific consumables and physical space. However, resources to meet those needs are limited.

Despite shortfalls in college HEAF allocations, the department was able to replace much-needed capital equipment that was critical for the continuation of externally funded grant research. However, repair costs of scientific equipment during this year ($68K), exceeded the previous three year average ($52.3K), highlighting the need to budget for these anticipated expenses. Additionally, the department's success with respect to external funding significantly offset costs associated with scientific consumables. No progress was made identifying new physical laboratory space for the Department of Forensic Science this year. This continues to be our most critical need.

New initiatives to address enrollment shortfalls and graduate student funding were not successful. The impact of reduced enrollment at the MS level is now being felt, causing graduate courses to have less than five students. These shortfalls are expected to impact PhD enrollment next year, because the program recruits heavily from within its MS program.

Issues related to "clustering" were emphasized with faculty and addressed as part of the Faculty Evaluation System (FES). The department will continue to place additional emphasis on the quality of the graduate student research experience, and outcomes (specifically publication rates and external funding). Updates to the FES matrix during the next academic year will further reinforce this issue.

Physical Space and Enrollment

Closing Summary:

The two most pressing issues for the Department of Forensic Science continue to be physical (laboratory and office) space and graduate student funding (assistantships/scholarships). Given the impact that both issues now have on enrollment, solutions must be implemented. The gravity and consequences of issues related to physical space are well understood. The absence of faculty research space also significantly hampers our ability to attract productive research faculty in the sciences.

The existing allocation of space within the Chemistry and Forensic Science (CFS) building cannot accommodate current faculty or students. No additional growth is possible until these space needs are met. The department is optimistic however, that these issues will be addressed during the next academic year.

RELATED ITEMS