

Program Review Template for External Review Site Visit and Report

External reviewers are asked to use this template and rubric below to assist them in organizing their site visit. **The completed template constitutes the visiting team’s final report.** Rubric scoring should be the collaborative result of discussion between the two reviewers and reflect their collective judgment. The template parallels the organization of the program’s self-study. Reviewers will find important statistical information in the Data Packs, which, with the self-study, will be made available to reviewers before the site visit.

In responding to each of the ***Four Elements of Review*** below, external reviewers should consider and assess the *Criteria for Review* within the Elements. For each *Criterion of Review*, reviewers are invited to a) score the rubric from 1 to 4, and b) to provide comments and one or more recommendations. Comments can include reference to information or conversations, observations about campus practices, and statements about program strengths, weaknesses, and areas of improvement. Recommendations should be specific suggestions for improvement, irrespective of whether that improvement should be initiated at the program, division, or university level. *Reviewers need not provide a recommendation after each Criterion.*

Finally, at the end of the **Template for External Review**, reviewers will find space to make summary comments and recommendations, expressing their general observations and key suggestions for program improvement. *These summary recommendations will be particularly important* to program faculty, administrators, and members of the Program Assessment and Review Committee in the next stages of the program review process.

Program Name: Biology	Date of Site Visit: Nov. 18-19, 2009
External Reviewer One Name: Sandra Sharp	Affiliation: CSULA
External Reviewer Two Name: David Gray	Affiliation: CSUN

Rubric Scoring Scale

SCORE	STAGE	DESCRIPTION
1	Initial	The program is at a preliminary stage in this practice. The program shows the need for additional policies, resources, or practices in order for it to provide the education program to which it is committed or aspires. Insufficient data is available to make determinations.
2	Emerging	The program partially satisfies the criterion. Some data is available documenting this dimension. The program has many, but not all, of the policies, practices, and resources it needs to provide the educational program to which it is committed or aspires.
3	Developed	The program satisfies this criterion, with developed policies and practices. The program has the availability of sufficient resources to accomplish its program goals on this dimension. Data demonstrates accomplishment of this criterion.
4	Highly Developed	The program fully satisfies this criterion. The program may serve as a model and reference for others on campus. The program's practices, policies, and/or its resources contribute to program excellence on this dimension.

Template for External Review

Instructions: External Reviewer should enter a numerical value in the Score box. Narrative responses should be made in the "Comments and Recommendations" sections below each criterion for review. Please enter responses in paragraph form. Text boxes will expand as information is entered.

I. Element One: Program Purpose and University Goals		
CRITERION FOR REVIEW	INQUIRY	SCORE
A. Program Mission and Operating Practices	1. Does the program have a mission statement or statement of program goals that is appropriate?	3
	2. Does the program have an organizational structure and procedures for its key activities such as advising, scheduling, chair selection and review?	2
Comments: We regard the mission statement and long-term objectives as appropriate and sufficient. Program organizational structure is well developed with the exception of RTP procedures.		
Recommendations: Finalization of RTP procedures is crucial. The program has had RTP procedures in review above the program level for some time. The two untenured TT faculty indicated that a lack of an approved RTP document has added uncertainty to the process.		
B. Program Relation to University	1. Is the program supportive of the University's mission and its strategic priorities?	4

Mission	2. Is its program integrated and supportive of the campus's four mission centers?	4
	3. Is the program supportive of the campus' general education program?	4
Comments: Biology has many course offerings with GE, interdisciplinary, international and service learning components. These courses make up a substantial part of the curriculum.		
Recommendations: Additional curricular changes will need to balance continued support of the campus' mission and GE program with development of more specialized upper division coursework.		
C. Dissemination of Program Mission and Goals	Has the program disseminated information about itself to key constituencies, including faculty, professional colleagues, current and prospective students, and the community?	3
Comments: The program has an excellent website, and had been effective at promoting cross-linkages with local industry and the community. Several program symposia events are well attended by a broad spectrum of CSUCI students, staff, and faculty. Excellent brochures describing the program are made available to interested parties.		
Recommendations: Recruiting of transfer students from the CC system could be enhanced, especially if/when the CSU is again seeking to increase enrollment.		

II. Element Two: Achieving Educational Outcomes		
CRITERION FOR REVIEW	INQUIRY	SCORE
A. Curriculum Requirements and Expectations for Learning	1. Do the program's curriculum and degree requirements reflect high expectations of students?	3
	2. Is that curriculum reflective of current standards in the discipline?	3
<p>Comments: The Program is to be commended on the depth and breadth of the curriculum available to its students. Appropriate courses are available across the multiple emphases offered. Syllabi included in the Self-Study reflect sufficiently demanding and sophisticated content. It is laudable that the Program learning outcomes show an emphasis on the process of science, together with inclusion of the broad biological concepts. The concepts are addressed in more detail in individual courses. The majority of courses include laboratory experience, and the program includes multiple instructional support technicians and classroom laboratories well-outfitted for current methods appropriate for an undergraduate experience. There is no doubt that expectations are high, when the program so clearly values developing graduates who not only know facts, but also can think and work as scientists. The capstone course, the internships, and the individual laboratory and field research experiences are excellent examples of the effort of the faculty to develop strong critical thinkers and analysts. Discussions with several of the strongest students in the department showed that these students were extremely appreciative of time and effort from their faculty with respect to providing research opportunities and help with coursework. Discussions with faculty revealed that they expect high levels of performance from the students.</p> <p>The curriculum reflects current standards. BA options are appropriately available for students planning careers that require less extensive chemistry and math.</p>		

<p>Recommendations: : Some frustration was expressed by some of the more involved students in the department over the apparently wide-range of preparedness of students in any given class and the consequences that had on the ability of the professor to make the class equally compelling for all students and to keep expectations high enough for the best students. This problem is well known throughout the CSU. We recommend that faculty continue to set high standards for doing well in each course, carefully examine what prerequisites are required, consider a system for enforcing prerequisites, and encourage better study habits in students by directly rewarding attendance at learning communities.</p> <p>We encourage the faculty to consider requiring the full year of Biology 200 and 201, both of which are required for all emphases, for entry into any of the higher level biology courses. Although some of the upper level courses require neither or only one of these two introductory courses as background, for the student who has not completed both, the level of preparedness with respect to thinking scientifically and studying for science courses is less likely to have progressed as far as that of students who have had a full year of college biology. This difference may make it harder to address the needs of all students.</p> <p>As the research facilities and the variety and sophistication of available research instrumentation grows, it should be possible to expose the students in the 400-level laboratory courses to even more sophisticated methods than are currently available in the undergraduate classroom laboratories.</p> <p>It would appear that there is currently no allowance for research/internship units in the emphasis on evolution/ecology/organismal biology. We suggest that this be reconsidered.</p>		
B. Course and Program Learning Outcomes	1. Has the program developed assessable learning outcomes for its courses and for the program?	4
	2. Are course learning outcomes aligned with program outcomes?	4
<p>Comments: The program makes available on the website the broad learning outcomes for the degree as a whole, as well as more specialized outcomes for each of the individualized courses. The specific outcomes for each course are also available on the individual class syllabi. The Self-Study documents that the outcomes are also made available in hard copy brochures and pamphlets. The ready availability of these outcomes to students, prospective students, the university community, and others who may be interested is indeed laudable.</p> <p>The outcomes are entirely assessable, and the course outcomes are well aligned with program outcomes.</p>		
<p>Recommendations: The following recommendation is included for lack of a better suited topic heading under which to discuss it. It came to our attention in discussions with students and with instructional support technicians that multiple laboratory sections for the same lecture section do not always contain the same content. We acknowledge that differences in the details of content need not mean that there is a difference in achievement of the expected learning outcomes, and that for the instructor who is being forced to teach someone else's curriculum, it may feel like an infringement of academic freedom. In addition, these differences speak to a laudable degree of devotion on the part of each individual lab instructor regarding development of class exercises that he/she feels best get the important points across. However, there are at least two negative consequences of not having a standardized laboratory curriculum across sections. The first of these is that students comparing notes across lab sections become apprehensive regarding the relative ease of attaining a given grade in one section vs. another. While not a particularly high-minded concern, it is a fair and realistic one for students to have, because grades count for admission to graduate schools, summer research programs, and jobs. Second, the job of the instructional support technician setting up multiple versions of a lab for the same class becomes particularly challenging. We suggest that the faculty teaching the lecture and laboratory sections of classes with multiple sections taught by different instructors convene to draft a laboratory manual that appropriately addresses the learning outcomes, and takes advantage of contributions from all of the involved faculty. We strongly encourage the administration to provide the faculty involved, whether they be tenure ladder or lecturer faculty, with compensated time and/or salary advancement for developing such a manual.</p>		
C. Learning Outcome Data and Analysis	1. Does the program regularly collect course and program learning data?	3

	2. Is that data analyzed, available, and used for program improvement?	2
<p>Comments: An ambitious and detailed assessment plan has been developed and is in the early phases of implementation. The plan involved a series of multiple choice test questions that were embedded in the exams for two courses, one lower division and one upper division. Results were provided, and were analyzed in a manner that will be helpful to the program. It is clear from the reports by several individual faculty members that they are constantly revising their courses in response to perceived need or in response to needs voiced by the students. These department members and others like them are to be lauded for committing the time and energy required outside of heavy classroom hours and grading time to design course manuals and make improvements with each class offering. Student success was also measured by the number of presentations made by students at local and regional symposia, as well as a variety of other student accomplishments. An impressive number of students have achieved honors, scholarships, acceptance to graduate programs, and acceptance to jobs following graduation. In addition, the 50% response rate from alumni was excellent!</p>		
<p>Recommendations: The reviewers encourage the program to continue using and responding to their excellent assessment plan, breaking the plan down into small, minimally time-consuming goals based on programmatic learning priorities.</p>		
D. Timeliness of Degree Attainment	Do students in the program attain the degree in a timely fashion?	3
<p>Comments: No data was presented on average time to degree completion by first time freshmen. The average number of years to degree for transfer students is 3, which is quite reasonable. A certain number of super-seniors is suggested by a percentage of seniors at 30% or above in 3 of the last 4 years, whereas the number of juniors in those same 4 years ranged from 20-26%. However, again, as long as the percentage of seniors does not escalate, time to graduation appears to be well under control. The program is to be applauded for scheduling classes and providing roadmaps to accommodate students who because of other life commitments must plan an undergraduate career lasting more than the traditional 4 years. We commend the program for allowing course substitutions outside an emphasis when necessary to avoid delay of graduation.</p>		
<p>Recommendations: Students did mention that the courses they needed to complete an emphasis were not always offered frequently enough to allow timely progress to graduation. We support the chairperson's suggestion to decrease the total number of different emphases by combining some that are not substantially different from each other. This streamlining may make the student feel less constrained with respect to completion of his/her program, while still keeping it possible for the student to take multiple electives in his or her area of greatest interest. It may also have the added effect of making the program appear less daunting to first time freshmen.</p>		
E. Involvement of Students in Curricular Activities	1. Are students active participants in the learning process? Consider whether the program provides opportunities for students to participate in curricular-related activities, such as research and creative opportunities, service learning experiences, performances, and internships?	2-3
	2. Does the program provide support by way of co-curricular activities for its students, such as clubs, fieldtrips, lectures and professional experiences?	4
<p>Comments: The program provides multiple methods by which students can be active participants in the learning process, including performing laboratory exercises and experiments, writing papers, preparing and giving presentations, and participating in individual research and internships. In 2007-2008, 33 students completed research or internship experiences, and 25 completed pre-health service learning, for a total of 58 out of 260 enrolled majors – approximately 20%. This is very high and speaks to the devotion of the department faculty to providing practical experience for students. The internship website is wonderful! The new STEM institute should make it possible for the science programs to bring in more grant and contract money, which will increase opportunities for student participation. New leadership in the Grants and Research Office will make it possible for faculty to acquire additional grants and contracts to support faculty/student research and projects. The university is to be commended on its decision to allocate funds for a library-centered poster development and printing center, making it easy for students to assemble top notch presentations. An outstanding year Poe Symposium is presented.</p>		
<p>Faculty make it possible for students to become more actively involved in their learning by holding office hours and scheduling additional appointments for one on one discussion of research or classroom content. The extensive resources made available on line make it easier for</p>		

students to become more involved in their education and to follow up on their career interests. The Biology Club has a cadre of bright, enthusiastic, active members.

Recommendations: Conversation with faculty and students revealed that the on-campus research mentors include not only tenure-ladder faculty, from whom such mentoring is expected, but also program lecturers, for whom this level of participation in the educational process is typically neither expected nor required. These lecturers are thus not only devoted teachers, but devoted scholars as well, who have a demonstrated passion for their areas of interest and for passing on that interest to students by acting as research mentors. It is important that the administration as well as program tenure ladder faculty honor the contributions of lecturers with space, serious consideration of all their contributions when considering renewing contracts and range elevations, and wholehearted consideration of their expertise as nationally and/or internationally competitive teacher/scholars. Lecturers should be encouraged to submit detailed evaluation files and should be able to rest assured that if they make the time in their schedules to assemble complete files, the contents of those files will be reviewed seriously and construed as significant to their career development, and that their many positive contributions will be viewed with the respect and recognition they deserve. This is particularly true given that many of the lecturers in the biology program have been with the program from its inception, have not just taught curriculum but have built it, and have started or maintained their own research programs.

The fact that CSUCI students have so many opportunities to develop presentation skills in their various classes and on-campus symposia strongly suggests that these same students could often participate in national conferences with their mentors. For faculty to be able to work with students to bring their research to a level appropriate for presentation at national conventions, it will be important for the administration to work with all faculty to develop a plan that will allow for further development of the infrastructure, instrument maintenance program, and grant-writing success so that participation of students in research will continue to develop. For the immediate future, the research facilities in Chaparral Hall need a purified water system installed, and a vestibule must be constructed to eliminate the enormous build up of dust that occurs as people enter and leave the lab. Such dust can contaminate experiments and damage instrumentation. All faculty can be more effective as teacher/scholars when their research facilities are located in close proximity to their offices and teaching laboratories.

Involvement of both a graduate and undergraduate student on the advisory board would help to address both phases of education and would get more students involved.

We were able to find limited information about the Biology Club online by searching for Biology Club on the CSUCI website. Students can bring that club into greater prominence on the Department webpage.

Students expressed frustration over the fact that while they perceive themselves as diligent in broadly distributing, across the entire campus, news about seminars and symposia sponsored by the program, they rarely see flyers and advertisements for events from other programs advertised near the science buildings. We encourage administration to work with chairs of all programs to bring about the widest possible dissemination of public scholarly and entertainment events.

F. Advising and Academic Support	1. Does the program provide adequate student advising?	2-3
	2. Does the program have a relationship with student support services, such as EOP, career services, and disability accommodation?	3

Comments: Faculty make themselves available for student advisement. A central advisement office is in place. Students are able to take advantage of EOP, career services, and disability accommodations. The program is to be applauded for providing basic career information for its various areas of emphases.

Recommendations: It is suggested that at minimum a link be provided from the biology webpage to career services and that the program consider further developing its own resource of career information by links to job sites for the various subdisciplines of biology.

We encourage the program to develop ways of making sure that all biology majors seek advisement regarding their choice of courses and their academic standing on a regular basis. Such advisement should increase each student's chances of consistent progress toward graduation, should facilitate detection of student academic distress before it goes out of control, and should reassure students that faculty are easy to talk to and can be helpful with a wide range of student issues.

It is also important that administration join with the program faculty in stressing to the central advisement office that students in science majors must get started on their science courses early in order to be able to graduate in a timely manner. The biology, math, chemistry, and physics required for a science degree can not be effectively squeezed into the last 2-3 years of an academic career.

G. Articulation and Transfer	Does the program have policies and procedures that facilitate articulation with community colleges? Are transfer students accommodated and integrated into the program?	3
Comments: Articulation agreements are in place such that transfer students can be accommodated and integrated into the program.		
Recommendations: While overall the program has experienced growth, the % of new upper division transfer students in the program may be experiencing a decline. It is recommended that faculty and administration look at whether or not this decline is real, and if so, to what it can be attributed. It is also important to note that while Hispanic students have constituted 25% of majors, they represent only ~10% of those graduating. It will be important to determine whether this is a loss in retention, or simply a longer time to graduation, and to implement approaches to making sure that retention and timeliness are optimized for all students.		
H. Retention	Are native and transfer students in the program being retained in the major and by the University?	3
Comments: See above.		
Recommendations: See above.		

III. Element Three: Developing Resources to Ensure Sustainability		
CRITERION FOR REVIEW	INQUIRY	SCORE
A. Faculty Resources	Does the program have faculty in sufficient number, and with appropriate rank, qualification, and diversity, to support its academic program in a manner consistent with its objectives?	1
Comments: An approximately 3-fold increase in numbers of faculty (from 5 to about 15) is required in order to ensure expertise across the true breadth of biology. The program recognizes that growth in the numbers of full-time tenure track faculty will be required before a state-side MS program becomes viable. We would encourage that growth provided it is accompanied by appropriate growth in facilities, most importantly research space. Clearly this will be a process undertaken over several years, made more protracted by the current budget crisis. However we noted that several exceptionally dedicated part-time faculty have been <i>de facto</i> faculty members nearly since the inception of CSUCI, and that in addition to teaching, they have contributed extensively to curriculum, advisement, student research and individual scholarly activity; several may be competitive for tenure-track positions and their consideration for such positions should not categorically be dismissed.		
Recommendations: Within the limits of fiscal reality, every effort should be made to grow the faculty and associated research facilities. Consideration of hiring from within a core of dedicated part-time faculty could ease this transition both institutionally and financially.		
B. Professional Staff	Does the program employ professional staff --support coordinator, technicians, lab assistants --sufficient to support the academic program?	3
Comments: Current staffing is appropriate to the current size of the program; growth of staff, especially those with technical expertise, will be		

essential as the program grows.		
Recommendations: None.		
C. Faculty Workload and Evaluation	1. Is faculty workload aligned with the program's goals for effective teaching, scholarship, and University and community service?	Varied, see below
	2. Are part and full time faculty evaluated regularly and according to University policies and practices?	2
Comments: Rubric scores re. faculty workload: teaching = 2, scholarship = 1, service = 4. As a necessity, when building a new program from the ground up, initial faculty workloads for service related activities were very high, so high as to preclude to a large extent the development of vigorous scholarly output. Teaching workloads are high, but clearly within the norm for the CSU. Evaluation of faculty still requires finalization of RTP documents.		
Recommendations: We recommend that the program and institution view itself as emerging from the initial phases of university and program development. From this time forward, the emphasis can shift to a more balanced blend of teaching, research, and service that characterizes the CSU.		
D. Faculty Development	Do faculty have and use professional development plans (PDPs)? Does the program support faculty development opportunities sufficient to improve teaching, learning and scholarship?	2
Comments: PDPs are in place and used in the current RTP process. This process is under revision however. PDPs are often developed by faculty prior to their full realization of the burdens of committee work, and the realities of the pace of research that is possible given the current state of research facilities infrastructure.		
Recommendations: During the RTP process, teaching, scholarship, and service should be measured against an established internal standard rather than against the wishful thinking of a PDP developed prior to a new faculty member's recalibration to the pace of research possible at CSUCI. The PDP is best used within the program between the faculty member and the program chair to assess and reinforce goals, but it is not currently reasonable for the University-wide RTP committee to hold new faculty accountable to an over-ambitious PDP. Even if it is the case that the PDP is used at the University level to ensure that a faculty member with a unique charge is fairly evaluated, the faculty member should have the opportunity to recalibrate in consultation with chair should university-related circumstances beyond the candidate's control have rendered the PDP over-ambitious.		
E. Fiscal and Physical Resources	1. Does the program have the budgetary resources needed to support its educational program?	3
	2. Are its facilities, including offices, labs, practice and performance spaces, adequate to support the program?	2
Comments: Current budgetary support for the current educational mission is adequate and appropriate; the teaching areas are very nice and serve the students well.		
Recommendations: Development of facilities appropriate to support the role of research experiences for undergraduates as well as professional scholarly development of faculty is critical to the growth of the program.		
F. Developing External Resources	Does the program seek and receive extramural support at the appropriate level, including grants, gifts, contracts, alumni funding?	2
Comments: The program has pioneered strong ties with local industry, particularly biotech. These relationships are likely to provide the groundwork for significant employment of students, which may encourage future gifts and alumni funding. Large federal research grant activity, e.g. proposals to NSF, NIH, USDA, should be encouraged		
Recommendations: We recommend development of a small grants program to provide faculty with BOTH seed money and release time; making		

eligibility for such a competition contingent on prior submission of large grant proposals would increase the volume, and eventually the competitiveness, of proposals.		
G. Information Technology	Does the program have access to information resources, technology, and expertise sufficient to deliver its academic offerings and advance the scholarship of its faculty?	3
Comments: We gathered little direct information about this during our visit; no one raised this as a concern, and several computer labs are documented in the self-study, so we expect that current IT resources are adequate. We did note that the teaching labs did have projection systems and other modern IT infrastructure.		
Recommendations: None		
H. Community Involvement and Liaison	If appropriate, does the program have an advisory board or other links to community members and professionals? Does the program use community professional input for program improvement. Does the program maintain a relationship with its alumni?	3
Comments: The current professional master's programs were not the subjects of this program review, however it is clear that significant community links have been developed for those programs and they benefit the larger program as a whole. The program appears to have maintained strong contact with alumni, as evidenced by a 50% reporting rate from alumni documented in the self-study.		
Recommendations: None		

IV. Element Four: Creating a Learning Centered Organization		
CRITERION FOR REVIEW	INQUIRY	SCORE
A. Program Planning	Does the program engage in planning activities which identify its academic priorities and their alignment with those of the division and the University?	3
Comments: The faculty in the program have done an outstanding job of developing a competitive, viable undergraduate program in biology for its students. At this point, the program is demonstrating its readiness to move to the refinement and growth stages of the program. The program identifies its needs for new full-time faculty congruent with the development of their programs featuring molecular life sciences and organismal/evolutionary/ecological sciences. It is active in developing classes in collaboration with faculty outside the department that address the integrative approach that is a hallmark of the CSUCI approach to undergraduate education.		
Recommendations: Given its aspirations, we encourage the program to develop a five-year plan that clearly specifies and justifies the areas it plans to maintain, develop, or change and describes how the plan addresses the missions of both the program and the larger university. With such a program in place, subject to revision as funding, student, or community needs arise, it will be easier to work with the administration to stay on target for continued improvement. That said, it will be much easier for the program to develop and carry out a long-range plan with greater support from upper administration in developing its cadre of tenure ladder faculty. We are uncertain that the administration adequately recognizes that program planning and morale can be thwarted by the nature of the current search process as we understand it. Greater administrative support is necessary both to maintain and grow the academic strength of the biology program, and to rescue the endangered morale of a strong group of colleagues, both tenure ladder and lecturer, many of whom have been with the program since it began, and many of whom from both groups, have expressed frustration with the hiring process. We strongly urge the administration to consider a hiring approach that recognizes that faculty fit within a program is a prerequisite to fit within the greater community. We recommend that administration identify hiring needs in collaboration with program faculty across the campus, establish for each year which specific programs will search in that year, and then advertise for positions in only those programs, with the full expectation that every position for which a candidate with suitable qualifications is recommended will be filled.		

B. Integration of Planning Resources	1. Is program planning integrated into the Academic Affairs budgeting process?	3
	2. Are program planning goals informed by student learning outcome data?	2
<p>Comments: Academic Affairs has been transparent with respect to how it administers distribution of funds to programs. The program is responding to data they have acquired from their assessment tools as time permits.</p>		
<p>Recommendations: Program planning will be enhanced by more concrete long-term planning developed collaboratively by the program faculty. Similar long-term planning and support by administration is imperative in order to allow for decreasing an apparent dependence upon CERF funds by increasing the growth of state, development, and external contract and grant funding. Such funding can then help to accommodate growth of tenure ladder faculty numbers; acquisition of new equipment; maintenance of older, but still current equipment; and increased, high-quality faculty research space.</p> <p>It would be helpful if Academic Affairs could find a way to better accommodate the inherent unevenness of spending in science departments from one period to the next. This unevenness results from the varying degrees of expense in laboratory supplies across different courses, and from the unpredictability of instrumentation breakdown.</p>		
C. Professional accreditation	If the program holds or is seeking professional accreditation, are its practices and resources consistent with that objective?	Not applicable.
<p>Comments:</p>		
<p>Recommendations:</p>		

V. Summary Recommendations:

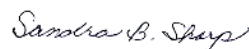
First, we commend the program and the university for having developed an effective teaching program within only a short span of time. It is clear that the students in biology that strive to make the most of the program do indeed receive an excellent education with significant opportunity for original undergraduate research and future career development. Congratulations are due to current and previous university and program administration, and to current tenure ladder and lecturer faculty members. You are serving your students well.

To build upon these successes, we make the following recommendations:

- 1) **Build the full time faculty and the research infrastructure in a coordinated manner.** Short and long term goals should be distinguished along with what is fiscally possible. For example, hiring full-time faculty from within lecturer ranks is significantly less expensive than hiring outside faculty, especially at ranks higher than Assistant Professor. Similarly, simple lab renovations to Chaparral Hall would greatly enhance the utility of the space well before genuinely new research space becomes reality.

- 2) Before conducting faculty job searches, there should be clear leadership from the President, Provost, and Dean to determine which programs have priority for available positions. **Programs should conduct searches only with a reasonable expectation of hiring.** Criteria used in determining the acceptability of candidates should be made transparent, and should reflect both program and university priorities. The university should never make an offer to a candidate that the program finds unacceptable.
- 3) Options with the curriculum have proliferated far faster than the numbers of faculty; **the curriculum should be streamlined.** Specifically we recommend reconsideration of many of the options and a reduction in the numbers of required courses. As the faculty grow, the numbers of elective courses will grow reflecting faculty upper division teaching interests.
- 4) As the numbers of course sections have increased, especially in laboratory courses, so has the need for **standardization of syllabi and the expectation of course materials taught.** This is especially important given the large numbers of lecturers. In many cases, it is the lecturers who have developed the courses. In those cases it would be appropriate to develop a uniform lab manual for courses with input from (and perhaps authorship by) the lecturers.

Submitted by: David A. Gray and Sandra B. Sharp



Signature(s): _____

Date: 12/14/2009 _____