Recommendations Concerning
USC School of Engineering Faculty Evaluation Procedures

These recommendations were approved by a unanimous vote of the Engineering Faculty Council on May 1, 2002.

1. The Provost's "Policy on Evaluation of Department Chairs and Faculty"

In his policy document of August, 2000 entitled "Policy on Evaluation of Department Chairs and Faculty" (http://policies.usc.edu/), the Provost requires that

> " Each school's dean will work with his or her faculty (through the elected faculty council or other committee as appropriate) to revise or create a plan for the faculty merit review system, which the deans will submit for approval by the Provost's office."

The Provost's policy document states that,

> " The central goal of the evaluation process is to encourage and reward outstanding performance by faculty designed to place the department and USC on the very top rung of American universities,…"

and that

> " In each school, or department, or division, or other appropriate unit there will be a faculty academic consultative committee (by whatever name) which will be responsible for faculty merit review,…"

The Provost's policy document emphasizes the

(a) importance of successfully differentiating between the performances of individual faculty members;

(b) admissibility and value of explicit faculty activity profiles;

(c) importance of recognizing work that is "interdisciplinary, furthers one of the strategic initiatives or critical pathways of the University's Strategic Plan, or involves international activities;"

(d) need to document faculty evaluation procedures; and

(e) importance of quantitative measures ("the use and report of hard data"), though by no means to the exclusion of qualitative assessment.

The policy document places final responsibility and authority for merit evaluation with the Dean,

> " The dean has ultimate responsibility to determine faculty merit evaluation, because he or she is responsible under the University bylaws for the proper conduct of the school's educational program, and has the duty to look after the academic welfare of the students of the school."

The policy document concludes, however, by emphasizing the requirement that merit reviews begin with a process of peer review.

> " Merit raises start with peer merit review, following these evaluation guidelines, unless the Provost has approved an exception."

2. The Objectives of Faculty Evaluations

Faculty members should be motivated by their intellectual commitments to their fields, to their students, and to the continued ascent of the school and the university. Merit raises are important because they affect faculty morale by communicating the institution's recognition of the individual faculty member's skills, efforts, and achievements. Thus, in addition to supporting the Provost's stated objective of encouraging and rewarding "outstanding performance by faculty designed to place the department and USC on the very top rung of American universities," the School of Engineering merit review procedures should generally motivate faculty performance and reward merit. Merit review should motivate faculty members by linking preferred outcomes to rewards, thus providing faculty members with the information necessary for them to allocate their activities in a way that benefits both the institution and themselves.

Clear definition and consistent application of the metrics for faculty evaluation should be the over riding principle applied to the evaluation of faculty performance. Activities that promote the continued ascent of the school and university are a subset of the activities in any faculty activity profile. Faculty activities are diverse, and the range of faculty roles in the institution is wider than this. Faculty members deserve to be evaluated across all of the responsibilities their roles bring to them. A success faculty evaluation procedure requires a balance between transparency and comprehensiveness.

3. Faculty Evaluation Procedures in the School of Engineering

Based on a review of

(a) the APT/EFC Merit Review Subcommittee reports for academic years 1999-00 and 2000-01;

(b) the instructions issued to department chairs in the Spring of 2001; and

(c) the evaluation procedures documented or otherwise described in the Spring of 2002 by the chairs of EE-Systems, EE-Electrophysics, BME, ISE, CE, CSCI, AME, MASC, and CHE departments;

it is clear that each department has in place a defined process for collecting and reviewing relevant data, and for ranking the faculty. The procedures followed by the department chairs vary substantially across departments, but are consistent with the guidelines and requirements defined by the dean's office. There are differences in the quality and cost of the processes across departments. On the whole, however, all appear to be reasonable and substantially fair, and in most cases there appears to be adequate faculty input regarding both the formulation and the execution of the evaluation processes. See Table 1 for a summary of departmental procedures.

Table 1: Summary of School of Engineering Departmental Faculty Evaluation Procedures

Chair Centric Merit Rating Procedures		
Chemical Engineering Merit ratings are executed by the department Chair, who reports that there is no faculty interest in establishing a consultative committee.		
Scale: 5 points	Defined Average?: Unknown	Documentation: No
Parallel Chair and Committee Merit Rating Procedures		
Civil and Environmental Engineering A rotating, three-person committee selected by the Chair rates the department faculty separately and the scores are averaged. The committee does not meet. The Chair rates the faculty separately, and adjusts his ratings to try and achieve an ordinal match with the committee averages. Both merit ratings are reported to the Dean.		
Scale: 5 points	Defined Average?: No	Documentation: No
Aerospace and Mechanical Engineering A four-person committee selected entirely at random by the Chair rates the department faculty separately. The committee meets, and a single score for each faculty member is produced either by averaging or consensus. The Chair rates the faculty separately using the committee merit ratings as initial values. Both merit ratings are reported to the Dean.		
Scale: 5 points	Defined Average?: Unknown	Documentation: Yes
Biomedical Engineering A committee of the whole rates the department faculty separately (except for themselves) and the scores are averaged. The Chair rates the faculty separately. Both merit ratings are reported to the Dean.		
Scale: 5 points	Defined Average?: Unknown	Documentation: Yes
Mixed Chair and Committee Merit Ranking Procedures		
Industrial and Systems Engineering The Chair serves as the standing member of a rotating, three-person committee. Each of the three rates the department faculty separately. The scores are not averaged. The committee meets to achieve a consensus merit rating for each faculty member, with special emphasis on the perceptions of the Chair. The committee does not rank teaching performance. Teaching performance is determined based on student evaluations, a published formula using student evaluations as an input, and on classroom visits by the Chair. The current Chair indicates that a change in practice is pending, and that he expects to begin reporting two sets of merit ratings to the Dean, one from the committee and one from him. The committee will not evaluate teaching.		
Scale: 5 points	Defined Average: 3	Documentation: Extensive
Electrical Engineering – Electrophysics The Chair serves as the standing member of a rotating, three-person committee that also includes two senior faculty members selected by research area. Each of the three rates the department faculty separately, but does not rate the committee members. The scores are not averaged. The committee meets to achieve a consensus merit rating for each faculty member except the committee members. The Chair ranks the two senior faculty members participating in the committee. The committee does not rate the Chair.		
Scale: 5 points	Defined Average?: 3	Documentation: Yes

Materials Science The Chair serves as the standing member of a rotating, three-person committee that also includes two other faculty members. Each of the three rates the department faculty separately. The committee does not rate the Chair. The three scores are averaged. In the very rare case that the scores provided by the three committee members are very different, the chair might decide on the final score rather than taking the average.		
Scale: 5 points	Defined Average?: Unknown	Documentation: No
Computer Science The Chair serves as the standing member of a rotating, four-person committee that also includes one Assistant, one Associate, and one Full Professor. Each of the four rates the department faculty separately and the scores are averaged to generate a merit rating for each faculty member.		
Scale: 5 points	Defined Average?: Unknown	Documentation: Pending
Committee Centric Merit Ranking Procedures		
Electrical Engineering – Systems Separate, four-person Research and Teaching/Service Committees meet to form consensus merit ratings for each faculty member, which are subsequently combined via the weights called out in the faculty activity profiles.		
Scale: 5 points	Defined Average: 3	Documentation: Extensive

The respective roles of faculty merit evaluation committees and department chairs in identifying final merit scores also vary across departments. As noted in Table 1, some departments report two scores, one from a department committee and one from the chair. Some report only a score determined by committee. In some cases the role of the chair is restricted to a standing position on the department committee. Some report a committee score subject to minor adjustments by the chair to account for special circumstances. In one department, scores are determined solely by the chair. The faculty performances of the chairs are rarely evaluated by the merit review committees.

The opportunity for individual adjustments in faculty load profiles also varies across departments. Some departments use a vector of firm weights that are standard for all faculty members. Others strive for a standard vector of weights, but admit differences in special cases reflecting either long-standing commitments to individuals, or exceptions that serve the interests of the department. One department assigns each faculty member to one of a small set of profiles configured to match the preferences of the faculty member and the needs of the department. One department chair makes substantial adjustments in the weight vector on an individual basis across all faculty members. Some departments break elements of the weight vector into sub-scores (e.g., number of publications and indirect cost recovery, quality of teaching and number of units delivered, etc.).

Collectively, these variations reflect reasonable differences in departmental cultures and traditions, the priorities of the department chairs, the priorities of the current department merit review committees, and the collective expectations of the several faculties. Overall, these modest differences are healthy, a likely source of satisfaction for chairs and faculty members alike, and a likely source of insight for the dean. Further, School of Engineering departments vary in size from five faculty members to almost 40, and the

logistics of faculty evaluation are necessarily different in such different environments. In small departments, the faculty evaluation committee might logically be a committee of the whole. However, despite the admissibility of these differences, the objectives of merit review should not vary across departments. The objective should remain to motivate action by linking outcomes to rewards.

For the past several years, a Merit Review Subcommittee has been drawn from the ranks of the school APT Committee. The Merit Review Subcommittee assesses the nature and results of each department's merit review procedures with each of the respective chairs. . In the spring of 2000, the Merit Review Subcommittee became a joint APT/EFC body. The subcommittee summarizes its findings in a confidential report to the Dean, with copies to the APT and EFC chairs. A non-confidential summary of the report that excludes specific mention of department names is distributed to the APT and EFC members.

4. Assessment of the Status Quo

While none of the current variations in the departments' faculty evaluation procedures is unreasonable, there are some deficiencies in some procedures with respect to the Provost's guidelines. Some departmental procedures are undocumented. Further, there is a tendency at both the departmental and school level to weight the perceptions of chairs more heavily in the merit review process than the Provost's policy statement requires.

Chairs have an important role separate from and in addition to the determination of merit ratings. Chairs recommend merit raises based on these ratings. Chairs are also in a unique state of information with respect to the activities of their faculty colleagues, so it is reasonable that chairs be involved in the determination of merit ratings to some degree, particularly with respect to qualitative assessments. This subjective focus is consistent with the guidance currently given to chairs in the School of Engineering.

Many of the committee merit ratings completed in the School of Engineering are completed by committee members who act separately, whose findings are averaged, and who do not see the findings of their fellow committee members or their chair. A truly consensual committee or committee/Chair process remains the exception in the School of Engineering, not the norm. If merit review committees do not meet as a group, some of the responsibilities called out in the Provost's policy document become difficult to execute.

The chairs' stated opinions about the importance of their own role in the merit review process has varied considerably. In the recent past, some chairs felt that they effectively had no substantive role, and that merit raises were decided in the dean's office. Others felt they had a defined role, but that the role was too subordinate to the dean's. The provost's policy document offers useful clarifying guidance with respect to the faculty evaluation process. The merit rating process begins with the faculty, and may include the chair. The chair acts to support the quality of the merit review process and recommends merit raises based on the outcome of the merit review process. The dean acts on the

collective recommendations of the chairs in light of the aggregate fiscal position of the school, his or her own priorities for the development of the school, and his or her knowledge of faculty activities. The provost approves (or disapproves) the dean's decisions.

Most members of the faculty recognize that there are differences in the economic opportunities available for graduates in different engineering fields; and in the level of agency, foundation, and industry interest in the research associated with different fields. There are also different prevailing wages in different fields. The school's efforts to hire new faculty members will necessarily involve wage offers that vary across fields. The alternative is to offer all prospective faculty hires the prevailing wages in the most highly paid fields, and this would be an inefficient use of scarce resources, which would constrain the growth of the school. Most faculty members are sophisticated enough to recognize that the same merit review score in different departments will generally lead to different relative and absolute merit raises.

Despite cognizance of these differences, faculty members still retain a legitimate expectation of a procedural fairness with respect to merit review. Unfortunately, in too many cases, this expectation has not been met, at least in the recent past. Prior to the recent change in administration, the chairs reported a significant level of voluntary faculty disengagement from the merit review process. Most of the chairs serving in the spring of 2000 voiced some degree of dissatisfaction with the school's merit review procedure. Most chairs felt that their faculty members did not take the merit review process seriously, and that faculty members frequently perceived a disconnection between the contents of annual reports and the magnitudes of merit increases. There were also sharp differences in morale across the departments. In short, the most recent documentation indicates that many rank and file faculty members do not consider the merit review process in the School of Engineering to be credible.

This is troubling. The change in school administration presents an important window of opportunity to re-establish the credibility of the school's merit review process, and we encourage the dean to take advantage of this possibility. Progress has already been made. The dean's decision to provide mid-year salary adjustments provided an important signal to many faculty members that the dean intends to link performance and pay.

5. Recommendations

The discourse concerning faculty evaluation that the Provost's August 2000 policy statement was intended to provoke has not yet occurred in School of Engineering's departments. This process should begin in the School of Engineering at the departmental level as quickly as possible.

Next Steps

(a) The faculty members and chairs in those departments in which merit review procedures are undocumented should document their current procedures. The chair or the chair's designee should lead this activity and ensure its conclusion,

but the faculty should be involved in the process either as a whole or in form of a committee.

(b) The faculty members and chairs in those departments in which merit review procedures are being revised should continue their efforts to finalize their procedures in light of the Provost's policy statement of August 2000. The chair or the chair's designee should lead this activity and ensure its conclusion, but the faculty should be involved in the process either as a whole or in form of a committee.

(c) Those departments with documented procedures should review these procedures in light of the Provost's policy statement of August 2000, and take this opportunity to ratify these departmental procedures with a vote of the faculty.

(d) Should the dean also evaluate chairs as faculty members, or should the departmental merit review committee begin the merit review process in the case of chairs? The dean must evaluate chairs in their role as department chair. The dean has asked the EFC for input concerning appropriate evaluation criteria for chairs. Thus it seems reasonable that department faculties should consider how department chairs should be evaluated as faculty members.

(e) Chairs recommend merit raises based on merit reviews. Consequently, it is important that the chairs have confidence in their respective departments' merit review procedures. In the event of an intractable difference of opinion between a chair and the department faculty with respect to acceptable procedures, the dean or associate dean for academic affairs will have to resolve the question. The academic senate has clearly expressed the position that dispute resolution is not the responsibility of the various faculty councils. If the dean feels that he cannot proceed without advice, the EFC will take steps to provide advice.

(f) The procedures adopted by each department should be consistent with the Provost's "Policy on Evaluation of Chairs and Faculty." In particular, each department should field a faculty merit review committee, even as a committee of the whole, if necessary; and should focus on quantitative measures.

(g) Averaged merit ratings are acceptable committee products. However, it would be more effort, but would certainly be useful with respect the quality of final results, if faculty consultative committees met and deliberated in an effort to achieve consensus ratings rather than proceeding separately as individuals. Appointment and promotion decisions are discussed in the school's Appointment, Promotions, and Tenure committee. This is a confidential forum in which opinions are expressed and compared, information is shared, and, in the best case, a meeting of the minds occurs. This sort of process occurs with respect to the determination of merit ratings in some departments, but not in most. It would likely strengthen the process, improve results, and increase the consultative committee's sense of accountability if the committee met to try and achieve consensus ratings. The merit review committee should have at its disposal both the summary information provided to the Dean's office and the Annual Faculty Records submitted by the faculty.

(h) Faculty with joint appointments, whether interdepartmental or interschool, should be protected by the language in a completed, signed Joint Appointments Checklist and Agreement. The Checklist should specify that the primary unit bears responsibility for the faculty merit review, though it should be standard procedure for the primary unit to request at least a nonbinding assessment from the secondary unit(s). The primary unit is acting as a steward for the interests of the secondary unit, and is responsible for evaluating the full range of the joint appointee's contributions as a USC faculty member.

(i) The Dean should continue the practice of asking for a separate faculty merit ranking from the individual chairs. An additional set of numerical ratings is of modest usefulness. The greatest benefit in asking for additional information from the chairs is the opportunity for the chairs to provide brief, subjective assessments of faculty performance, and any special conditions under which faculty execute their work.

(j) The Dean should continue the practice of working with the chairs of the EFC and the APT Committee to designate a joint APT/EFC Merit Review Subcommittee to review the results of each department's merit review procedures with the respective chairs. The core charge of the subcommittee should be to,

" review the procedures followed in the merit recommendations suggested to the dean by the department chairs, and to assess whether or not due process, as stipulated in the various departmental, school, and university procedures and guidelines, was indeed followed."

(k) The Dean's office can and should do more to provide guidance concerning performance standards. For example, the ISE Department's merit review documentation offers descriptions of faculty activities corresponding to different merit evaluation scores. Similar examples appear in the EE-Systems procedures, though these are organized somewhat differently. These descriptions are reasonably generic, and could inform and anchor the merit review process in other departments with only slight abstraction.

(l) Also, there Dean's office should establish a common numeraire for merit ratings that denotes the average performance in within each department, most likely the value 3 on a 5 point scale. This would do much to improve the comparability of merit ratings across departments.

(m) The relationship between merit ratings and merit raises should be unambiguous. In general, an average performance should produce an average merit raise. A uniformly poor performance might very well result in a zero merit raise. Consistently poor performance of the sort identified in the Provost's policy statement should produce the response called for in that statement: dismissal for cause due to "neglect of duty or incompetence."

(n) The Dean should call periodically for the current versions of each department's merit review procedures, and incorporate these departmental plans into a school review plan that calls out the school's time table for annual faculty evaluations; calls the role, composition, and charge of the EFC/APT Merit Review

Subcommittee; and includes copies of forms and instructions disseminated to chairs and faculty members. This official plan for the School of Engineering faculty merit review system should be posted on the School of Engineering website, possibly as part of the EFC website.

Chair Roles, and Chair Development

If the chair, the dean, and the departmental faculty are in agreement, there is no reason that the chair should not participate in the in determination of quantitative merit ratings, either as a member of the faculty evaluation committee, or by providing a parallel set of merit ratings in addition the to the committees. However, the role of the chair in completing merit reviews should be no greater than the role of the consultative faculty committee.

Chairs' opinions about their roles aside, the chairs appear to have different understandings of how the school's raise pool will be allocated. The dean should help ensure that the chairs understand the respective roles the dean and the provost has defined for them, for the faculty merit review committees, and for the dean. It is important that the chairs have a clear understanding of their own standing in the merit review process and the merit raise process used to evaluate and reward faculty members. It would be beneficial for the chairs to have an opportunity to compare notes. There is evidence that the chairs have done so within the past year, but this step appears to have taken place because the school's administration was not demonstrating leadership in this dimension. The chairs should understand that the dean views stewardship of an effective, meaningful faculty evaluation to be one of their core duties. While the process might vary across departments, there should be no substantive ambiguity for anyone with respect to the role played by the chairs in establishing merit ratings, and recommending merit raises.

The Teaching Problem

There has general agreement across department chairs, EFC members, and the former University Committee on Undergraduate Education that it is difficult to evaluate teaching, and there is broad skepticism about the quality of information available from student course reviews. The variation in scores generated by student evaluations is relatively small. A few departments stratify scores by course level to try and control for systematic variations in student attitudes. Most chairs have considered observing faculty in the classroom, but this activity remains rare, and chairs who promote peer review of teaching have not received a warm reception from their faculties. The prospect of peer review of instruction, whether by the chair, a representative of a faculty committee, or another party, is contentious but important. The quality of the review offered to faculty research activities greatly exceeds the quality of attention given to faculty teaching. This inequity should be addressed in the form of advice to the dean, but by the EFC as a whole.

Improving Credibility by Reporting Aggregate Outcomes

In the past, the dean's office has strongly resisted distributing summary information about the distribution of School of Engineering faculty salaries. We encourage the dean to revisit this position. The merit review process cannot succeed in motivating the faculty choices deemed most important by the provost and the dean unless the process is widely perceived to be credible. One compelling way to promote this perception is to provide aggregate information about outcomes so that individual faculty can understand and reconcile their own efforts and results relative to aggregate norms. The objective is to leave faculty members with every opportunity to configure their activities in ways that will benefit themselves by benefiting the school and the university. The dean has a unique opportunity to convince faculty members that this degree of control is within the grasp of individual faculty members, and we encourage him to exercise this opportunity.

There are several types of aggregate information summarizing the outcome of the merit review and the merit raise process that could and should be made available to faculty members. A report consisting of a histogram of school-wide percent salary raises, a histogram of school-wide merit ratings, and a simple correlation coefficient would demonstrate the link between performance and pay very effectively. In most cases, this information could be made available by department. A scatter plot displaying the *ranks* of merit ratings and the *ranks* of percent salary raises is a reasonable alternative. Use of such ordinal information would be particularly appropriate in the case of school's smallest departments.