²age 11.1244.

2006-1975: TENURE AND PROMOTION REQUIREMENTS: LARGE UNIVERSITIES VS. SMALL COLLEGES

Jon-Michael Hardin, Virginia Military Institute

Associate Professor, Department of Mechanical Engineering, Virginia Military Institute, Lexington, VA. Degrees: BSME 1982, University of South Carolina; MSME 1991, University of South Carolina; Ph.D. Theor. and Applied Mechanics 1998, University of Illinois at Urbana-Champaign. Research Areas: solid mechanics, materials, and engineering education.

Timothy Hodges, Virginia Military Institute

Engr. Division Coordinator, Dept. Head, and Professor, Department of Mechanical Engineering, Virginia Military Institute, Lexington, VA. Degrees: BSCE 1980, Virginia Military Institute; MSME 1983, Montana State University; Ph.D. ME 1990, University of Virginia. Research areas: machine design, solid mechanics, and engineering education.

Tenure and Promotion Requirements: Large Universities vs. Small Colleges

Although tenure and promotion requirements are typically listed prominently in all faculty handbooks, the mere "checking off" of those listed requirements is rarely sufficient for the awarding of tenure or promotion at most institutions. Rather, the keys to being awarded tenure or promotion are 1) an understanding of the puzzle of written and unwritten requirements specific to each institution, and 2) the linking of those pieces of the tenure and promotion puzzle to form a foundation upon which the New Engineering Educator can successfully construct their professional careers. This understanding and linking of tenure and promotion requirements is far from clear-cut and varies significantly between larger research-oriented universities and smaller teaching-oriented colleges, and even varies significantly across similar types of institutions. A complete listing of all possible tenure and promotion requirements at all types of institutions is, of course, not feasible within a single paper. However, even without such a complete list of requirements, it is important that the New Engineering Educator (NEE) understand that there are differences in those requirements between different institutions, especially between large research-oriented universities and smaller teaching-oriented colleges, and that there are specific requirement areas for which they must learn both the written and unwritten rules for their particular institution. In this paper, the authors discuss some fundamental concepts that underlie the understanding and successful linking of those requirements, and highlight the primary differences in those requirements between larger and smaller institutions.

For this paper, the authors reviewed the written tenure and promotion requirements of six institutions—three larger research-oriented universities (LRU) and three smaller teaching-oriented colleges (STC). One of the STCs was the authors' own institution. The authors also interviewed Mechanical Engineering Department Heads and some of the faculty, both tenured and non-tenured, from these institutions in order to gain a better understanding of the unwritten requirement rules. Although their sample size is clearly small, the authors feel that their general results and conclusions would not vary significantly with a larger sampling size. Additionally, the focus of this paper is to show that there *are* differences in these requirements rather than to present an overview of all of the possible differences in those requirements. Therefore, this paper must be somewhat generic in nature. However, by presenting some of the variations in the written and unwritten rules for tenure and promotion requirements that exist at a sampling of LRUs and STCs, the authors intend to show the NEE that these variations do, indeed, exist and, therefore, that the NEE must gain sufficient knowledge of the written and unwritten rules at their *specific* institution in order to navigate a successful career.

Common to all but one of these institutions, the written tenure and promotion requirements were divided into three primary categories: Teaching, Research/Professional Development, and Service. The single exception was an STC that included an additional category of "Student Development." Although the written requirements of both the LRUs and STCs included the three main categories of teaching,

research/professional development, and service, a close look at each of these categories reveals the most significant differences between the LRUs and the STCs.

I. Written Tenure and Promotion Requirements

IA. Teaching Requirements

Based upon written tenure and promotion requirements, the requirements most consistent between the LRUs and STCs would appear to be those for teaching. Professors at both types of institutions must present evidence of good student evaluations and receive positive peer review of classroom teaching. Typically, both types of schools also allow such additional supporting evidence as teaching awards or attendance at teaching workshops. The explicitly written concept supporting the teaching requirements for each of these institutions was dedication to excellence in teaching. However, the fact that most of the LRUs listed their Research requirements before their Teaching requirements while each of the STC listed Teaching first, provides an initial indication of a significant difference of focus on the Teaching component between LRUs and STCs.

An examination of the tenure and promotion forms of these institutions shows that even the definition of Teaching may vary significantly between these two types of institutions. At one LRU, the list of required documents under Teaching was divided into two subareas. The first Teaching sub-area listed was 'Research Supervision' which included the categories of Post-doctoral Research Programs, Supervision of Doctoral Programs, Supervision of Masters Research Programs, Undergraduate Student Supervision (to include the titles of research projects and dates) and Other Research Supervision. Only in the second sub-area entitled "Teacher Evaluation" were student and peer teaching evaluations listed. In a similar examination of forms for STCs, only student and peer teaching evaluations were included under the Teaching category. Clearly, what constitutes 'Teaching' may differ between these two types of institutions. As noted in the Tenure and Promotion Guidelines of one LRU:

"The School believes strongly that teaching and research is a truly integrated process. Therefore, the faculty members are expected to have a genuine and sustained commitment to excellence in teaching and are expected to develop and maintain a distinguished research program that supports his/her teaching endeavors...excellent research programs bring recognition to the School and University which in turn attracts outstanding undergraduate and graduate students and faculty".²

An obvious contrast in underlying principle seems to exist between the above LRU guidelines and the Teaching guidelines given by a specific STC:

"At [name of school], teaching, developing and improving the educational process, and advising and counseling students are paramount. Therefore, teaching and advising will occupy a

principle part of the available time and effort for the majority of faculty."³

The authors believe it is important at this juncture to state explicitly that in this paper they are neither defending nor supporting any of the principles or requirements of Teaching used by either LRUs or STCs. It is the authors' intent only to ensure that new engineering educators are aware of the differences that may exist between the principles and requirements for Teaching at LRUs and STCs so that those educators may more closely align their choice of institution, and their work at that institution, to the principles and requirements of Teaching at that institution without confusion or misunderstanding.

IB. Research/Professional Development Requirements

Not surprisingly, the most obvious difference in tenure and promotion requirements between LRUs and STCs were those for the Research/Professional Development category. This difference can first be seen in the very names listed for this category in the written requirements: at most LRUs, this category was called "Research", while at most STCs it was listed as "Professional Development." The Research requirements at all LRUs included evidence of the development of externally-funded research programs and professional papers published in high-quality peer-reviewed journals. While collaborative efforts were recognized at LRUs, tenure typically required evidence of significant individual achievement of these goals.

The requirements for this category at most STCs were indeed found to be more focused on the professional development of the faculty member with the underlying principle being to ensure that the faculty member continue knowledge currency in their field. Although STCs included professional publication in this category, they also listed professional presentation as an equivalent option, unlike most LRUs. Interestingly, most STCs included pedagogical publications under this category, while LRUs that included pedagogical publication listed it under their Teaching, rather than Research, options.

Although research is listed as an option by all STCs under "Professional Development", the STCs did not require the development of externally funded research. Additionally, according to the department heads of the STCs, most faculty research at their institutions consists of research projects, rather than the continuous on-going research programs found at LRUs, with those projects typically being conducted by faculty over the summer. Similar to the difference in the definition of Teaching between LRUs and STCs, there appears to be a difference in the definition of Research between these two types of institutions. While LRUs view 'Research' as an externally-funded program of continuous research, most STUs generally appear to see 'Research' as work on a specific research project or projects conducted over the summer. The difference between LRUs and STCs in their definition of 'Teaching' seems to exist also in their respective definitions of 'Research.' Therefore, although both types of institutions may use the terms 'Teaching' and 'Research' in their written requirements for tenure and promotion, one may have to dig deeper to discover what those terms mean specifically to each institution.

In addition to the differences in meaning of Teaching and Research in written requirements is the difference in the relative weight given to each within the tenure or promotion process. Sometimes this difference, although written, may be subtle. For example, a closer look at the forms associated with tenure and promotion at one STC revealed that a faculty member's overall annual evaluation rating could not be higher than their evaluation rating in the Teaching category. Since the written requirements for promotion at that institution are based on a specific average minimum annual evaluation rating, the Teaching cap placed on annual evaluations reveals a substantial weighting factor that would have significant impact on promotion. However, that weighting of Teaching over Research is not evident through a reading of the written tenure and promotion requirements alone.

IC. Service Requirements

Both LRUs and STCs listed serving on departmental and institutional committees as part of their service requirements. All of the LRUs and some of the STCs also included service in professional societies in this category. While some of the STCs also gave community service as an equivalent option, none of the LRUs did so.

II. Unwritten Tenure and Promotion Requirements

Although most written requirements for tenure and promotion at both LRUs and STCs do not list specific target numbers or goals of, for example, papers published or external research funds obtained, at all of these institutions there existed an unwritten understanding of what 'counts' toward tenure and promotion. Based on interviews with department heads and faculty, the existence of this understanding of specific unwritten tenure targets became clear. For example, although a specific dollar amount for external research funding was not listed in the written requirements of any of the LRUs, a required figure of around \$100,000-\$150,000 per year with an increasing trajectory in external research funding was mentioned by one LRU. Since the requirement options at most STCs were broader than those of the LRUs, department heads and faculty at the STCs were sometimes hard-pressed to give specific number requirements, yet at one of the STCs, a minimum of one paper publication every two years was noted. This target would probably not, however, satisfy the unwritten requirement noted be one LRU department head that faculty should produce a 'substantial' body of recognized journal articles.

Since written requirements are not typically specific, differences in understanding of the unwritten requirements between tenured members within a department or between the department and the Tenure and Promotions Committees of both LRUs and STCs can also strongly influence tenure or promotion decisions. As the department head of one STC noted, he felt that the requirements for tenure and promotion at his institution seemed to be shifting towards more emphasis on research than teaching. He added that he harbored concerns about the effects of that shift on teaching effectiveness and wasn't sure if the written requirements had been modified to reflect this shift. Such ambiguity clearly effects tenure and promotion decisions.

The lack of specific written targets or goals might appear to breed unwritten requirements and thus promote the possibility of more differences in the understanding and application of those unwritten requirements. However, most department heads of both the LRUs and STCs seemed to agree with the principle that one had best be careful when making a list of what others should do because eventually that will be all they will do. Most of them noted that specific written requirements could, by their very nature, lead to minimum achievement or overlook significant achievement that should be counted towards tenure or promotion.

The most significant difference in unwritten requirements between LRUs and STCs was both evidenced by the percentages department heads provided concerning the relative time spent by faculty on Teaching, Research/Professional Development, and Service at their institutions and by the differences in the course teaching load between these two types of institutions. Both types of institutions said service represented about 10-20%. However, the STCs gave a split of 60% and 40%, respectively, to Teaching and Research, while the LRUs reversed that split. Although these differences may appear relatively small, it should be recalled that most LRUs may define teaching and research by a different set of criteria than do the STCs and so the difference in percentages between teaching and research may be larger than the stated values suggest. Additionally, the course teaching loads at STCs are typically much higher than those at LRUs.

III. Conclusions

As has been shown, the requirements for tenure and promotion vary greatly between LRUs and STCs. Therefore, it is very important for the New Engineering Educator to read the written requirements for tenure and promotion provided by their specific institution and to talk with department heads and faculty to determine the specific unwritten rules and targets, such as those noted above. Yet, as has been shown, these steps are not always sufficient to ensure a successful career since the definition of key terms may not be consistently understood across the institution. Additionally, there may be subtle, yet significant, weighting factors within the written requirements that may not be evident to the NEE. Therefore, the authors believe that it is also necessary for the NEE to ask for, and closely examine, the forms associated with the tenure or promotion process and the forms used for annual faculty evaluation at their institution since those documents can reveal more clearly the significant factors underlying the tenure and promotion requirements at most institutions. Lastly, the NEE must realize that it is their responsibility dig deeply enough within their own institution to ensure that they are aware of all the requirements, both written and unwritten, that will determine whether they are ultimately awarded tenure and promotion.

1. LRUs: University of Virginia, Vanderbuilt University, North Carolina State University

- STCs: Rose-Hulman Institute of Technology, Washington and Lee University, Virginia Military Institute
- 2. Promotion and Tenure Guidelines, School of Engineering and Applied Science, University of Virginia, Revised-March 3, 2005, 1.
- 3. Faculty Responsibilities, Academic Freedom, Promotion, Tenure, and Retention, III. Duties and Responsibilities of the Members of the Faculty, A. Teaching, Faculty Handbook, Rose-Hulman Institute of Technology, 5.