

Tenure and Promotion Policy Department of Computer Science

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I. Introduction

The purpose of the Tenure and Promotion Policy is twofold: to facilitate and track the academic growth of each professor; and to provide consistent guidance for the professor in the Department of Computer Science during the promotion and tenure processes. This document should be interpreted as extending the university tenure policy and procedures and specializing them to computer science rather than superseding them. Elements of the Policy should not be viewed as rigid rules, but as guidelines and are colored by the dynamic characteristics of computer science. The discipline changes from year to year, forcing innovations in curriculum and requiring significant amounts of faculty time to remain current.

As members of the university faculty, each faculty member in the Department is evaluated periodically with respect to tenure or promotion. Each review shall consider the individual's total professional record, emphasizing the three traditional categories of teaching, scholarship, and service. This review process assumes that each faculty member contributes to the curriculum, to the effective education of the students, and to the professional reputation of our programs.

The expectations described here reflect the mission and vision of the Department of Computer Science, the School of Engineering and Computer Science and Baylor University. To obtain a favorable recommendation for tenure, promotion to associate professor, or promotion to professor, a candidate must meet the required minimum term of service specified by Baylor University. In addition, the candidate must have established a satisfactory, documented record of: 1) teaching proficiency within the School, 2) contributions in scholarship presented in public venues, 3) contributions to campus and professional service, and 4) a clear demonstration of an active faith. It is essential that the candidate begin to assemble a portfolio containing this documentation beginning with his or her first semester at Baylor.

If the candidate is to successfully meet the expectations for promotion or tenure, the Department must ensure that the candidate has a workload and an environment that provides the necessary time and resources. It is also essential that the candidate be advised annually of his or her progress toward achieving tenure or promotion. Towards these goals, tenured faculty in the department will serve as mentors for untenured faculty.

II. Teaching Expectations

The Department of Computer Sciences recognizes that teaching takes many forms. Faculty share in the responsibility of providing a quality education by, among other things, teaching courses, directing student research, mentoring students in development

projects, advising student organizations, coaching competitive teams, delivering talks on special topics and advising students academically. All of these contributions are valuable and are to be documented in appropriate sections of the credentials notebook. The department teaching evaluation focuses on course instruction as representative of the candidate's teaching.

A teaching evaluation compares what a teacher does – and produces – to the prescribed curriculum and the expectations of the faculty. But more importantly, it attempts to determine whether students have been equipped to master the formal concepts and develop and refine the practical skills necessary to contribute productively in industry or to pursue more advanced coursework. Effective instruction will normally include introduction and explication of material in class as well as carefully constructed opportunities for hands-on experience outside of class, either individually or in groups. Consequently, a teaching evaluation 1) examines course artifacts, 2) assesses what happens in the classroom, and 3) attempts to determine whether the students have been well served by the instruction.

The computer science department's evaluation of teaching includes a peer review component. The intent is for each candidate to be reviewed by every tenured faculty member at least once before tenure review. Every semester, each candidate will be assigned one tenured faculty member as a reviewer. The reviewer will conduct at least one scheduled review of a classroom lecture in every section. The reviewer will also meet with the candidate to review course artifacts for each section. A departmental Peer Review Report form provides a consistent instrument for capturing the evaluation based on in-class observation and pre-observation visits with the candidate. Although peer review is a subjective process, the goal of this document is to make the process as objective as possible. The reviewer will discuss the results of the peer review with the candidate. The peer review report will become part of the candidate's tenure notebook and be considered in the Annual Reviews. The candidate may respond to peer reviews in writing within the tenure notebook and verbally during the Annual Reviews. (See Peer Review Report form for the Department of Computer Science).

A. Course Artifacts

Course artifacts include the following: syllabus, schedule, assignments, exams/quizzes, supporting materials (e.g., tutorials or online references), and grade distribution. These are evaluated as part of the peer review based on the following questions. Responses employ a 5-point Likert rating scale¹, but the faculty member responsible for the evaluation is also invited to include comments for each question.

1. Is the course syllabus reasonable?
2. Is the course schedule reasonable?
3. Is the course schedule consistent with the syllabus?
4. Is there a reasonable number of assignments?
5. Are the assignments consistent with the syllabus?
6. Are the assignments at a suitable level of difficulty?

¹ **5:** Definitely Yes **4:** Yes **3:** Yes & No **2:** No **1:** Definitely No

7. Is there a reasonable number of exams/quizzes?
8. Are the exams/quizzes appropriate for the course?
9. Is the grading scheme reasonable?
10. Is the grade distribution reasonable?

B. Classroom Visits

The classroom visits are evaluated using the following questions, also using a 5-point rating scale. Also, those performing the visits are encouraged to make comments for each.

1. Does it appear that learning is taking place?
2. Is class time used wisely and efficiently?
3. Is the teaching approach appropriate for the subject matter?
4. Is the teaching approach appropriate for the level of the students?
5. Is there rapport between instructor and students?
6. Is the instruction method appropriate for the topic at hand?
7. Is the information presented clearly?
8. Is there an appropriate amount of material given the time allotted?
9. Does the instructor speak clearly?
10. Does the lesson fit within a larger context?

C. Student Evaluations

Tenure track faculty should have 5-8 course sections in which they meet the six student evaluation criteria and have positive peer reviews. The six criteria for student evaluations are:

1. Explained material clearly
2. Effective style of presentation
3. Treated students with respect
4. Instructor was well-prepared
5. Course was well-organized
6. Students learned a great deal from this course

Student evaluations are an important component in the teaching evaluation, but overwhelmingly positive student evaluations alone are neither a necessary nor a sufficient condition for demonstrating effective teaching. Student feedback should be interpreted in the context of the course being taught, its enrollment and the peer evaluation of classroom instruction and course materials.

III. Research Expectations

A faculty member in computer science can be expected to maintain an active research program in one or more areas. This type of scholarly activity not only enables faculty to effectively direct graduate research projects, but it can also benefit classroom instruction, since there will occasionally be opportunities to integrate emerging ideas in the discipline into classroom presentations or projects. It is expected that an active research program will include dissemination of new ideas or results and/or the pursuit of external funding. A candidate who is making satisfactory progress toward tenure can be expected to publish at a rate of one or two refereed publications per year and periodically submit external funding proposals related to the candidate's research and teaching interests.

The computer science discipline depends on a publication model that includes both peer-review journal articles and peer-reviewed papers appearing in conference proceedings. Although this model differs from the practice of some disciplines in the university, the scholarly significance of the latter must not be misinterpreted as secondary. The Computer Science Department recognizes that scholarly activity can be disseminated in many ways. The most appropriate venue for publication depends on the nature of the work. As described later in this section, the significance of a published work depends critically on the degree to which it has influenced and advanced the discipline and can be expected to do so in the future. Although the following list is not exhaustive and is not intended to suggest that all publication types are equally significant, the record of a computer scientist with an active research program may include:

- Publications in journals with a peer-review selection process
- Papers appearing in regional, national or international conferences with a peer-review selection process and with published proceedings that are eligible for citation
- Papers appearing in non-peer-refereed journals or conferences with published proceedings that are eligible for citation
- Professional book or chapter
- Invited talks at regional, national or international conferences, academic institutions or in industry
- Patents awarded

Furthermore, an active scholar is expected to regularly engage in other activities that enable, contribute to or result from an active research program. While not classified as publications, these efforts are consistent with an active research program. The candidate should provide an analysis of his or her pursuit of and progress toward building an externally funded research program. External funding may be received from industry, from a private non-profit organization, or from a government funding agency at the local, state, or federal level. All activities are to be documented outside the refereed publications section of the tenure resume and interpreted as additional evidence of active scholarship:

- Submitting proposals for external research funding
- Submitting proposals for external funding of teaching or other academic activities

- Success in obtaining external funding in support of research, teaching or other academic activities
- Directing graduate or undergraduate research and development efforts
- Serving as a committee member for graduate students at Baylor or another institution
- Serving as editor or member of an editorial review board
- Serving as a reviewer for a journal, a national or international organization or a granting organization
- Development and dissemination of intellectual artifacts that benefit the academic community or the profession
- Attendance at an academic or professional conference

By the time of the tenure decision, the candidate should identify two publications that are offered as the most significant scholarly contributions. In the tenure resume, the candidate should identify these publications as examples of the most significant contributions and should give particular attention to demonstrating their significance.

The Department of Computer Science does not attempt to dictate *a priori* the value of one publication in comparison to another. Instead, we invite the candidate, through the tenure resume, to highlight the scholarly significance of each publication. It is expected that some of the candidate's publications will be more significant, and others will be less significant. While all forms of publication are valuable, some, because of their prestige, circulation or simply tradition, offer greater visibility to published work and greater potential for important work to benefit the computer science community. Likewise, some publications, because of their peer-review process, provide additional evidence that the work is relevant and of interest to the profession at large. Ordinarily, the scholarly significance of a publication might be indicated by a low acceptance rate; a very selective venue might have an acceptance rate of twenty five percent or lower. Many of the publications associated with major professional societies like the ACM or IEEE are highly visible and selective, although the scholarly significance and acceptance rate vary considerably. Scholarly work in computer science is categorized in many sub-disciplines which are served by specialized journals and conferences. For example, at the time of this writing the *International Conference on Intelligent Systems for Molecular Biology*, the *International Conference on Machine Learning*, and the *International Conference on Aspect-Oriented Software Development* are typical of specialized publication outlets that are highly selective and targeted toward a particular research area. These examples and many others have acceptance rates of less than 25 percent.

The department recognizes that measurements like Impact Factor vary considerably from discipline to discipline, and, without interpretation, this value may not accurately convey the significance of a publication venue. If impact factor is used, candidates are invited to put the score in context by making comparisons within their particular areas of specialization. Alternatively, citation of an individual publication can be a very meaningful measure of its impact. Although some of a tenure candidate's published work may have been in circulation for a comparatively short time, by the time of the tenure decision, a particularly influential article published early in the probationary period might be cited ten or more times in the works of other scholars.

For other scholarly works, it is more difficult to articulate a uniform approach for demonstrating and comparing significance. Ordinarily, a non-refereed publication is understood to be less significant than a refereed publication. However, particular circumstances might justify inclusion of such a work among the candidate's most important contributions. For example, an invitation to deliver a keynote address or to author a chapter in one's area of specialization can represent an important scholarly contribution and reflect considerable prior accomplishments in the field. The significance of a patent may be demonstrated by examples of licensing and application. Although these less traditional types of publications may be uncommon for tenure-track faculty early in their career, if present, they should be documented in the tenure resume and efforts should be made to appropriately demonstrate their significance and to connect them to the candidate's broader research program.

IV. Service & Faith Expectations

Service

Examples of service to the community and to the profession include activities at the level of those in the following list. This list is not intended to be exhaustive, and it is not assumed that all service activities are of equal benefit. The candidate should describe their relative merit as appropriate.

- Member of a committee within the department, School, University, regional, national or international academic organization or regional, national or international professional organization
- Officer of a committee within the department, School, University, regional professional organization, or national professional organization
- Reviewer for a peer-reviewed journal, a governmental (state) or private organization funding research, a governmental or philanthropic national organization funding research, book prior to publication
- Member of board of directors of a community, state, national, or international organization with a professional interface
- Organization of a regional, national, or international professional meeting, or some portion thereof
- Consulting or professional experience with industrial counterparts
- Giving public seminars, workshops, or short courses in the appropriate areas
- Advisor to student organizations
- Evidence of service to one's church, the community and the public at large
- Attendance at a regional or national professional meeting
- Attendance at a national or regional seminar concerned with a hardware or software product

Active Faith

Examples of an active faith are too diverse to list, and this document does not presuppose to determine which actions are examples of faith. However, since Baylor is a Christian institution, all candidates for promotion and tenure must provide evidence of an

active faith. This will normally include membership in a congregation and regular attendance at worship services, as well as other activities.

V. External Review

Tenure decisions in the Department of Computer Science depend on an external review process as described in the university Tenure Procedures document. As part of the tenure decision, impartial reviews from three or more scholars outside the university help the department and others involved in the tenure decision to consider an unbiased appraisal of the significance of the candidate's work in the context of the Baylor's environment and expectations.

In identifying external reviewers, the department chair will consult with department faculty to compile a list of the names of at least three potential external reviewers. The candidate will independently compile a list of at least three names of potential external reviewers. From these lists, the chair will select at least three individuals from which to solicit evaluations. This should include at least one name from the candidate's list, but the candidate should not be informed of the particular individuals serving as external reviewers.

Because of its academic and commercial significance, active scholars in computer science may be found in academia and in industry. Some research areas feature publications from professionals in equal measure to those from academicians, and it is common to find publications co-authored by researchers from academia and industry. Therefore, a representative sample of the active scholars in an area may require inclusion of some practitioners. In identifying the external reviewers for a tenure candidate, the chair may include professionals who hold the Ph.D. and demonstrate an active publication record. Reviews from these sources shall be considered no less significant than those from academicians. However, as required by the university tenure procedures, at least two reviews from academicians are expected. If more than one review letter is obtained from a practitioner, then the department chair must either obtain more than the minimum three letters required by the university or document the reasons for this exception as described in the university tenure procedures.

After identifying scholars willing to serve as external reviewers, the department chair will provide reviewers with, at minimum, the candidate's tenure resume, a copy of this departmental expectations document, a description of the candidate's teaching load and service responsibilities during the probationary period and copies of the two publications identified as the candidate's most significant contributions. The department chair will consult with the candidate to identify the materials required to best illustrate the significance of the candidate's contribution. If requested by the candidate or the external reviewer, the department chair is permitted to provide additional documentation demonstrating the quality, quantity and nature of the candidate's scholarship.

VI. Promotion to Professor

The promotion to the rank of Professor requires the same productivity as for tenure and promotion to the rank of Associate Professor. The candidate for Professor

should have a sustained publication record of one to two publications per year. Approximately one publication per three years should be a top-level publication. The candidate for Professor should have one section per year that satisfies the teaching requirements described in section II.C above. In addition to meeting the service requirements for tenure and promotion to Associate Professor, the professor candidate should also have served as mentor to an untenured candidate and have leadership roles within the department, school and university. Application to the rank of Professor can be initiated by the chair or the candidate. The promotion document is evaluated by the full Professors in the department. The recommendation is then processed by the dean and Baylor University.

VII. Transitional Candidates

Candidates for promotion and tenure who began their career at Baylor University before the start date of this policy will be considered transitional candidates. For candidates in this situation, the tenure expectations must be modified, and the extent of the modification shall depend on the amount of time the candidate operated under the older policy. If a policy change goes into effect closer to the end of a candidate's probationary period, more accommodations must be made to accept performance that matches expectations of the former. Due to the differences in situations, modifications must be handled on an individual basis for each transitional candidate. Modifications should be determined by the department chair in conjunction with the transitional candidate and approved by the tenured faculty. Possible modifications may include but are not limited to:

- Reduction in the number of criteria needed for a section to satisfy the teaching requirement (mandatory since formal peer-review did not exist prior to this document).
- Reduction in the number of publications
- Reduction in the number of top-level publications
- Expansion in the type of publications allowed
- Expansion in the type of external reviewers that are required
- Expansion in the types of national service allowed
- Expansion of requirements for teaching
- Expansion of requirements for service

VIII. Document Revision

This Tenure and Promotion Document should be reviewed annually by the tenured faculty of the Computer Science Department. The review should be to determine the appropriateness of the document within the changing climate of the computer science field and Baylor University. Any revisions to the document must include information as to how the changes will impact non-tenured tenure track faculty currently in the department.

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