Tenure and Promotion Policy for the

Department of Electrical and Computer Engineering

September 17, 2010

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This document outlines criteria, policy, and procedures for promotion and tenure in the Department of Electrical and Computer Engineering (ECE) at Baylor University.

This document serves as a supplement to, and is subordinate to, the approved criteria, policy, and procedures established by the Executive Vice President and Provost of Baylor University, including:

1. BU-PP 704 (Policy for Tenure at Baylor University),
2. BU-PP 702 (Promotion for Tenure-Track and Tenured Faculty)
3. *Tenure Procedures at Baylor University* available on the website of the Office of the Executive Vice President and Provost of Baylor University.

These documents hold priority should there arise any unintended conflict between them and this document.

1. Preamble

The ECE faculty is committed to value-added instruction through a combination of rigorous academic scholarship and the application of values-oriented Christian perspectives. As the Department moves to expand its research base at all levels, its members are committed to the discovery and application of knowledge for the advancement of its students and the betterment of the human condition and the church (*Pro Ecclesia, Pro Texana*). Successful candidates for tenure and promotion will demonstrate a high level of competence in teaching, research, and service, and be an active Christian.

2. General

A person shall attain promotion and tenure as rapidly as merited. Consideration for promotion and tenure should allow for the recognition of exceptional productivity and unusual achievement, but nominations leading to early tenure review require justification by the ECE Department. Although Associate Professors may be hired without tenure, ECE assumes all tenured faculty members are eligible, at minimum, for the rank of Associate Professor. Therefore, all

requirements for tenure delineated in this document should be construed as requirements for promotion to Associate Professor in ECE.

For the award of tenure, the ECE requires

1. excellence in research as measured by quality and impact,
2. a high level of effectiveness in teaching, and
3. a satisfactory record of service to the profession of engineering, the School of ECS, the ECE department and/or to the University.

3. Evidence of Research Excellence

The principal measure of excellence is a significant and sustained record of high-quality, scholarly research. Candidates for tenure are expected to demonstrate an independent record of scholarly research based primarily on their own work and that of graduate students they supervise.

Evidence of research includes publication, attraction of external funding, and technical innovation. The research evidence illustrations to follow, except as otherwise noted, are not all required for promotion and/or tenure. A preponderance of such accomplishments in the candidate's record is required for promotion and/or tenure.

3.1. Publication

There are many disciplines within ECE, as well as many interdisciplinary areas in which ECE overlaps with other types of engineering, computer science, mathematics, other sciences or medicine. Each of these disciplines has its own specialized journals and conferences. Consequently, appropriate venues for publication vary by research topic. That said, some general guidelines may be suggested. The IEEE (Institute of Electrical and Electronics Engineers) is the largest professional organization in the world, and a publisher of many highly-regarded journals and refereed conference proceedings in various ECE disciplines. Thus, many IEEE Transactions and Proceedings are appropriate venues for the dissemination of faculty research. However, since much ECE work is cross-disciplinary, there are many other professional societies whose journals and conferences are logical outlets for faculty publication. Thus, the candidate is ultimately responsible for justifying the significance of each publication and the quality of each publication venue. Information about the reputation of the publishing organization, information about the reputation of the journal (including information such as that provided by ISI Journal Reports), and information about the significance of the article (including reviews or citations of the work, or known influences of the publication on the work of other researchers) should be marshaled to make a case for the quality of the publication.

The following are appropriate venues for publication in ECE. The order of presentation roughly correlates with perceived significance for ECE faculty, in descending order. However, as described in the text below, there may be particular instances in which any of the types of publication may be especially significant. The tenure candidate should justify the significance of any given item.

1. peer-reviewed journal articles,
2. peer-reviewed conference papers at professional conferences,
3. patents, and
4. books and book chapters,

The most important specific measure of sustained scholarly research accomplishment is the quality and impact of the work. These attributes are typically assessed by peers and experts in a field. This is traditionally done by establishing a record of publication in peer-reviewed archival journals. Publication of abstracts provides evidence of appropriate and desirable exposure of the candidate's work, but should have minimal impact on candidate review. In some disciplines within ECE, papers published in certain conference proceedings undergo a rigorous process of selection, peer review, and subsequent revision. Such publications may be comparable to refereed journal articles, and should be clearly documented and identified as such.

Although a precise number of publications appropriate for promotion and tenure is difficult to specify, a typical candidate for tenure will have published a significant volume of work. The appropriate volume of work and its publication venue, however, can vary according to the specialty of the candidate. Experimentalists who are required to establish their laboratory infrastructure after arriving at Baylor will, for example, have a smaller volume of publications than an experimentalist for whom needed laboratory facilities and equipment are already available. In rapidly emerging fields such as computer engineering, the publication of conference papers is often preferred because of the timeliness of the information dissemination. These guidelines must therefore be established on a case by case basis. The quality of the work will then be judged by the written opinions of external evaluators who are experts in the field, supportive citations, journal reputation, and by ECE faculty members familiar with the candidate's work.

The candidates will receive feedback about the progress of their research programs from tenured colleagues at annual performance reviews. Such feedback may include discussions of potential funding sources, appropriate publication venues, and progress to date regarding the quality and quantity of scholarly productivity. Generally speaking, a tenure candidate should aspire to a scholarly productivity comparable to the creation of one or more notable artifacts during each year of service on tenure-track. Further, the candidate's research should show a progression from prior doctoral work, or work at a prior institution, to independent and sustainable work at Baylor.

Conference papers generally report interim or preliminary findings while journal papers provide a summary of consolidated results. Papers submitted to regional conferences have less impact than those presented at national and international venues. Non-refereed conference and journal papers should not be regarded for tenure consideration. Some candidates may delay publication to seek patent protection for the intellectual content of their research. Due consideration should be given based on a commercial value assessment of the research. Some tenure candidates may pursue a research agenda that prevents disclosure because of national security concerns. An evaluation of the intellectual merit of this research may be difficult to ascertain; however, due consideration should be given based on impact assessments.

3.2. Funding

The ECE expects its faculty to generate externally funded research to support scholarly investigations, graduate students, and other professional activities. In some cases, this additional supporting evidence may include success in generating collaborative funded research, if it is clear that the candidate has had a significant role in developing the funding, designing and performing his or her portion of the research, and reporting the results. When working in a collaborative environment, the candidate's individual contributions should be documented.

While the number of dollars and sources of funds may vary significantly with the given research activity (e.g., theoretical versus experimental), a norm of $100K per year (beginning in year 3) would not be an unreasonable expectation for a productive researcher in ECE. Research grants from competitive programs funded by federal agencies (NSF, DOE, NIH, DOD, etc.) are generally regarded as confirming the significance of a particular research endeavor. Non-federal dollars, especially those related to the commercialization of research results, should be considered equivalent to federal dollars.

3.3. Technical Innovation

In ECE, a candidate's technical innovations can provide evidence of the quality of research. Technical innovations include software development, hardware development, and chip design. As is the case with publication, there must be an impact of the innovation beyond previously available technical artifacts in order for the innovation to contribute to a candidate's tenure and/or promotion consideration. Innovations are almost always documented in publications.

3.4. Other Evidence of Research Excellence

Other evidence of research excellence in ECE is determined by its overall impact and quality as assessed by the following considerations.

1. The degree to which the candidate's technology has been reduced to practice. These include, for example, applications concerning the military, industry, appropriate

technology, and humanitarian work. To be considered for promotion and tenure, these research accomplishments must fall within the field of ECE.

2. The disinterested assessment of the candidate's work.

   (a) By solicited external letters of recommendation. (See Section 3.5.) Candidate evaluation by external reviewers is mandatory in all promotion and tenure cases.
   (b) In citations and in the technical and lay press. Positive commentary on a candidate's work by disinterested third party experts via citations in scholarly publication and in the press can be valuable testimony to the quality of a candidate's research.

3. Professional recognition for research, including

   (a) invited presentations at technical conferences and prestigious events,
   (b) best paper awards,
   (c) professional society recognition of outstanding research accomplishment, and
   (d) merit research awards.

3.5. Letters of Recommendation

The candidate's research excellence shall also be evaluated by reviewers external to Baylor University. At least four letters of recommendation from external evaluators will be required to assess the candidate's evidence of research excellence.

3.5.1. Choice of Reviewers

1. Reviewers should be top practitioners in their fields. Examples of top practitioners include leading researchers in industry, IEEE Fellows, Department Chairs and Deans at leading research universities, and endowed Professors. Recommendations from Associate Professors, although allowed, will carry less weight in the final evaluation. Alternately, letters from those with any perceived conflict of interest, such as former advisors and intimate collaborators, will have lesser weight. A letter from any source may be submitted in support of a candidate's case as long as there is clear disclosure of the credentials of the reviewer and their relationship to the candidate.
2. The ECE department chair or his or her designee will procure at least four letters of recommendation from top practitioners in the field of expertise of the candidate. More letters are desirable.
3. The candidate may suggest names of reviewers. The Chair will solicit names from the candidate at least two weeks before solicitations are sent. The Chair may also solicit input from senior faculty. The final solicitation, however, will be at the discretion of the Chair or his or her designee. The candidate will not be told the identity of the reviewers.

4. Ancillary recommendations from pastors and other clergy may be solicited in support of a candidate's active Christian faith. The solicitation of these recommendations can be initiated either by the tenure candidate or the Chair or his or her designee.

3.5.2. Documentation of Reviewer's Recommendation

Besides the written recommendation of each reviewer, copies of the following documents will also be included in the candidate's Tenure/Promotion notebook.

1. Copies of all correspondence with the reviewer. Only the Chair or their designee should correspond with the external reviewers.
2. A brief biographical sketch of the reviewer to establish credentials. This can be requested from the reviewer or composed from publicly available material.

In addition:

1. All recommendations, positive and negative, will be included in the Tenure/Promotion notebook of the candidate.
2. Correspondence with reviewers declining comment will also be included.

4. Assessment of Teaching

The ECE department recognizes that how we teach is as important as what we teach. Excellent teaching is the result of attention to both content and learning. The candidate is expected to connect these two bodies of knowledge by addressing a fundamental question: How do we create an environment in which many exciting, engaging, and empowering engineering educational innovations can flourish and make a significant difference in educating future engineers?

In addition to criteria delineated in Baylor University policy and procedure, the evaluation of a candidate's teaching effectiveness in ECE will include items such as student evaluation, peer review, and other evidence of appropriate scholarly and systematic educational innovation. The following is a sample of items that can be included:

1. Although student ratings are an important statistic in the assessment of classroom teaching quality and will be included in the candidate's notebook, they must be interpreted in context on a case by case basis.
2. The candidate's teaching effectiveness will be evaluated by senior tenured faculty member(s) appointed by the Chair. The evaluation will occur at least once each academic year prior to the annual evaluation. The evaluator will consult with the candidate concerning time and format at least one week before the evaluation. The evaluator will attend a class or seminar presented by the candidate and submit to the department chair a short report of their impression of the candidate's teaching effectiveness. The report should include observations related to the effective use of class

time, the level of class interaction and participation, the use of appropriate pedagogic methods, classroom management, and communication style (this list is not meant to be definitive or exhaustive, but a general guide to the nature of the evaluation.) The report will be made available to the candidate and placed in the candidate's record. (See the Mentoring Guidelines of the Department of Electrical and Computer Engineering and the Peer Evaluation Form.)

3. Besides classroom and lab duties, teaching in ECE includes instruction in methods of design and research. In addition to required excellence in classroom and lab instruction, teaching effectiveness will be assessed on the performance of supervised students in writing and presenting papers and proposals for appropriate venues.
4. Publication of teaching related material occurs in scholarly journals, conference proceedings, and on the web. Scholarly reporting of teaching innovations is an important activity. Baylor ECE places these activities in the area of teaching rather than research.

5. Service

As is the case with all Baylor faculty members, service includes participation in Christian faith related activities including active participation in a Christian community.

Departmental, School, and University service will be kept at a minimum for faculty prior to being awarded tenure. Tenure-track candidates rather should concentrate on research and teaching effectiveness.

The tenure-track faculty is encouraged to participate in professional societies. Examples include Associate Editorships in journals, organization of special sessions at conferences, participation in regional professional activities, and the review of journal papers and funding agency proposals. Likewise, interaction with industry is an encouraged service activity.

6. Promotion to Professor

The candidate for Professor in ECE shall have demonstrated excellence in research through establishment of a transnational reputation in his or her field. A successful candidate for Professor will nearly always have a consistent record of research excellence as evidenced by publications, supervised graduate students, external funding, and professional service. As is the case with tenure, these activities are to be assessed in terms of quality and impact albeit at a higher level and with an eye to consistency.

Baylor's distinctly Christian perspective is at times at odds with widely-held worldviews at some secular institutions that exclude faith-based values from technical scholarship. The ECE department recognizes this conflict and will consider for promotion engineering innovations and

research artifacts that focus on the application of humanitarian ideals and commitments. To be considered, these accomplishments must fall within the field of ECE.

Besides ongoing Christian service and service activities appropriate for tenure-track faculty, service evaluation will now include involvement in professional activities such as

1. participation in the management of professional societies as officers and board of director members,
2. editorships, and guest editorships of professional journals, and
3. involvement in the organizing and hosting of professional meetings.

Also, a moderate level of administrative activity in the department, school, and university is expected. There are many ways this can be accomplished, including

1. mentoring freshman through University Ministries programs,
2. chairing search committees,
3. mentoring junior faculty, and
4. University Committee participation.

7. History

Revised December 23, 2009

Revised April 13, 2010

Revised June 16, 2010

Revised September 10, 2010

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Mentoring Guidelines

Department of Electrical and Computer Engineering

September 17, 2010

The Electrical and Computer Engineering Department has developed the following guidelines to provide a framework for establishing the relationship between a tenure-track faculty member and a mentor. These guidelines are intended to provide a degree of flexibility so as to best meet the needs of the candidate. It is possible to have one mentor for teaching and another for research; however, it is desirable to have one mentor for both areas.

1. Mentoring Assignments

All tenure-track faculty members with a full pre-tenure period will have faculty mentors in the areas of research and teaching. The formal mentoring process will occur during the tenure candidate's first two years. After this period, mentoring for both teaching and research will be done on an informal or as needed basis. Tenure candidates are expected to make effective use of their assigned mentors. New tenure-track faculty members with prior teaching experience and a reduced pre-tenure period can choose whether or not they wish to have a mentor. Mentors will be tenured members of the Electrical and Computer Engineering Department. In order to allow the mentors to devote sufficient time to the mentoring task, a faculty member should not be assigned to mentor more than two people.

The mentoring assignments are made by the Chair and should be coordinated with the University mentoring program. Each semester, the tenure candidate will be given the opportunity to evaluate the quality of the mentoring process and to provide input to the Chair regarding the next year's mentor assignment. It is the responsibility of the candidate to inform the Chair if the mentoring process is not effective in meeting the needs of the candidate.

2. Role of the Mentor in the Teaching Area

The teaching mentor should meet with the candidate on at least a monthly basis and also evaluate at least three lectures during the first year. The mentor should provide friendly counsel regarding ways for improving teaching methods, classroom management and organization. Furthermore, the mentor should be available to review and provide constructive feedback regarding assignment materials, exams, and samples of student work. The mentor is also encouraged to arrange opportunities for the candidate to observe good teaching practices.

The mentor's detailed evaluation of teaching will be confidential and be accomplished during the two-year mentoring process. At the end of year one, the mentor will provide a written summary report to the Chair regarding the candidate's progress in the teaching area. It shall be the candidate's option as to whether or not to include the mentor's summary report in his or her Tenure/Promotion notebook.

The mentor will provide friendly counsel and help coordinate the department-level approval of the teaching plans cited in the department's document. Each semester the mentor should provide recommendations to the Chair regarding ways in which the department can contribute to the development of the candidate's teaching skills.

3. Role of the Mentor in the Research Area

The mentor should meet with the candidate on at least a monthly basis. The mentor is encouraged to serve as an informal accountability partner as the candidate strives to meet the research goals that are set forth in his or her research plan document. Each semester the mentor should provide an informal recommendation to the Chair regarding ways in which the department can contribute to the development of the candidate's research program.

Department of Electrical and Computer Engineering

Teaching Evaluation Form

Faculty Observed: _____

Date and Time of Observation: _____

Course Observed: _____

Rating Scale (1 = unacceptable, 2 = needs improvement, 3 = good, 4 = excellent, 5 = superior)

Presentation:

1 2 3 4 5	Main ideas clear and specific
1 2 3 4 5	Definitions given for vocabulary
1 2 3 4 5	Higher order thinking required
1 2 3 4 5	Sufficient variety in supporting information
1 2 3 4 5	Varies presentation media
1 2 3 4 5	Varies activities
1 2 3 4 5	Stresses important points
1 2 3 4 5	Uses concrete, everyday examples
1 2 3 4 5	Relates ideas to prior knowledge
1 2 3 4 5	Reinforces concepts by repetition or multiple examples
1 2 3 4 5	Promotes good student work habits/ethic

Organization:

1 2 3 4 5	Gives preliminary overview
1 2 3 4 5	Reviewed previous classes
1 2 3 4 5	Relates topic to whole course
1 2 3 4 5	Introduction captured attention of students
1 2 3 4 5	Polls students for understanding before moving on
1 2 3 4 5	Effective transitions w/clear summaries
1 2 3 4 5	Listens to student's questions carefully before answering
1 2 3 4 5	Concluded by summarizing main points
1 2 3 4 5	Lesson is well organized (use of multimedia etc.)

Interaction:

1 2 3 4 5	Makes eye contact with students
1 2 3 4 5	Asks questions and waits sufficient time
1 2 3 4 5	Encourages student questions/discussion
1 2 3 4 5	Uses positive reinforcement
1 2 3 4 5	Addresses students by name
1 2 3 4 5	Shows tolerance of other points of view
1 2 3 4 5	Helps individual students with problems
1 2 3 4 5	Instructor questions at different levels

Communication:

1 2 3 4 5	Use of language was understandable
1 2 3 4 5	Articulation and pronunciation clear
1 2 3 4 5	Absence of verbalized pauses (ah, um etc.)
1 2 3 4 5	Instructor spoke extemporaneously
1 2 3 4 5	Effective voice quality and variation
1 2 3 4 5	Volume sufficient to be heard
1 2 3 4 5	Rate of delivery appropriate
1 2 3 4 5	Effective body movement and gestures
1 2 3 4 5	Confident and enthusiastic
1 2 3 4 5	Effective use of media for presentation
1 2 3 4 5	Visual aids easily read

Professionalism:

1 2 3 4 5	Demonstrates a command of the material
1 2 3 4 5	Maintains adequate but flexible control of the class
1 2 3 4 5	Dress and grooming are appropriate
1 2 3 4 5	Is a desirable role model
1 2 3 4 5	Enforces standards

Excellent Performance Areas:

Areas to work on:

Other comments:

OVERALL EFFECTIVENESS RATING: 1 2 3 4 5

Date of Conference:_____

Observer Signature:_____