FACULTY EXPECTATIONS

1. Introduction

The College of Engineering is an academic community of students, faculty, and staff involved in educating the engineers of tomorrow and advancing the frontiers of science and technology through research and discovery. By viewing the engineering profession as a service to humanity, the College helps students become responsible, effective members of society. The primary goals of the College of Engineering are:

- to advance the frontiers of knowledge via engineering science;
- to translate, innovate, and integrate new technologies from the laboratory to society;
- to provide a rigorous education to prepare students to become highly qualified engineers and the society leaders of tomorrow;
- to prepare graduates to lead fulfilling professional lives, participate in lifelong learning, and assume roles as contributing members of society;
- to participate as national and international leaders in all dimensions of science, education and society;

To this end, faculty are expected to demonstrate excellence and leadership in research and teaching and to carry out the service responsibilities that help to sustain these activities.

2. Teaching

Dissemination of knowledge, and the training of engineers to apply that knowledge for the general welfare, is central to College's mission. All tenure and tenure-track faculty are expected to participate in teaching and to take teaching seriously, to do it well, and to seek to improve teaching through examination of their methodologies, student feedback, mentoring from more experienced faculty members, and accessing College and University resources for improving instruction.

2.1 Teaching Evaluations and Performance

Student evaluations, when adequate statistics are available, are an important measure of classroom teaching performance. Instructors are expected to encourage their students to complete course assessments, which helps assure robust responses. Instructors are expected to have good evaluations in both undergraduate and graduate courses they teach. As a general guideline, in the ENG teaching evaluation system (prior to Fall 2023), on a scale of 1-5 with 5 being the best, the top teachers in the College consistently score in the 4-5 range on the general questions such as "I recommend the instructor" or "My evaluation of this instructor's effectiveness is…". Scores in the less than 3.0 range are indications of sub-standard teaching. Scores in the 1-2 range are indicative of poor, ineffective, and unacceptable teaching performance. Of particular concern is a consistent trend of poor evaluations over several semesters. Similarly, in the new BLUE University-wide course assessment system (since Fall 2023), high scores (4 – 5 range) on the following:

1. "How well did the course fulfill its stated learning objectives?"
2. "How much did you learn from this course?"
3. "How well did the course foster a sense of belonging and an inclusive climate that was supportive of learning for all students?"

are typical of the best instructors. Scores on these questions in the less than 3.0 range are indications of sub-standard teaching. Scores in the 1-2 range are indicative of poor, ineffective, and unacceptable teaching performance.

Also recommended is peer-review of teaching via attendance at lectures by the department chair or other designated appropriate department faculty.

Department chairs are expected to meet with faculty who show poor performance and identify a plan of self-improvement and accompanying timeline. Ultimately, each faculty is responsible for engaging methods to ensure high quality teaching and addressing any concerns with teaching.

2.2 Supervision of Graduate Students

Because training the next generation of researchers and teachers is an important part of the mission of the University, doctoral and/or master's thesis supervision is expected of all research-active faculty. Whenever appropriate, the faculty is expected to guide and advise students to apply for Fellowship opportunities (such as NSF/DOD/DOE/NIH, etc.).

2.3 Academic Advising

Academic advising is another form of teaching, and it is an effective and critical component of our efforts to help undergraduates complete what is without question one of the most challenging curricula in the University. All faculty members, including Chairs, Deans, and Center Directors, are expected to advise undergraduate students.

2.4 Course Development

Where appropriate, faculty members (particularly tenured faculty) are expected to develop courses in their fields, including those at the graduate level. At the undergraduate level, faculty members are expected to review the syllabi and texts for relevance, and to incorporate new material and innovative methods for improving teaching on a continual basis. Textbook writing is considered a valuable contribution to the teaching mission of the College.

2.5 Minimum Teaching Load for All Faculty

All faculty members (both tenured and untenured) are expected to teach at least one course per year. Most faculty will teach at least two courses per year.

3. Research

Research-active faculty are expected to contribute to the knowledge base of our society and to educate graduate students in the process. An additional role of senior faculty is the mentoring of younger colleagues. Faculty are encouraged to build a portfolio of funded research that has a

balance of: a) research in which the faculty member drives the project as the lead investigator (i.e., the PI) and produces high impact scholarship as a lead author; and b) collaborative research in which the faculty member is a key scientific colleague adding important, creative, intellectual input to the projects. In the latter, the faculty member might be a Co-Principal or Co-Investigator and may supervise additional PhD students on the collaborative project. The balanced portfolio conveys that the faculty member does not support their research interests solely by acting as a co-investigator on collaborative funding projects. Note that valued collaboration does not mean just providing technical support for a colleague's research problem (e.g., applying standard methods or data analyses without change or providing access to use a specific instrument or computer code in one's lab). Instead, we encourage collaborations that engage each faculty member in a distinctive, creative role to solve problems not readily solvable by a single discipline or investigator. The College believes that this type of collaborative and convergent research is a key approach to broadening the impact of any one faculty member's research program and in the long-term leads to more robust and ambitious research programs in the collective portfolio of the College.

The overall criterion by which research success will be judged is scientific impact, i.e. opening new directions of research, advancing the state of the art, or altering the direction of ongoing research of others in the field. Among the indicators of impact are i) publications and citations; ii) doctoral theses supervised; iii) honors and awards; iv) editorial, advisory, and leadership positions; v) invited lectures; vi) externally funded research;
vii) patents; and viii) transfer of technology to the commercial sector.

3.1 Publications and Citations

The most important measure of the significance of any research activity is publication in high-quality, peer-reviewed venues. The College of Engineering recognizes that the set of these venues varies between disciplines but include archival research journals and highly competitive peer-reviewed conferences that publish full proceedings. Since the most prestigious venues tend to have the greatest impact, faculty are strongly encouraged to publish in the best venues in their field that have a high impact and/or where appropriate venues which reach large audiences. In addition, other proceedings, book chapters, scholarly books (as distinguished from texts, which are considered part of teaching) and submissions to databases may also be taken into account. Related indicators of impact are citation frequency, invitations to speak at or chair national and international conferences and symposia, and invitations to contribute papers. In general, impact is often increased by both the quality and number of publications. Therefore, although quantity will not by itself be a measure of productivity, it will be important to the extent that influence generally accrues from a sustained and strong publication record. In order to receive full credit for papers with multiple authors, the faculty member should have made a substantial contribution. This need not, however, mean first authorship. If there is a question, it is incumbent on the Department Chair to investigate the involvement of each author to determine if a given publication is worthy of full credit to the individual.

3.2 Doctoral Theses Supervised

The successful completions of doctoral theses by graduate students supervised by a faculty member provide a significant indicator of research, as well teaching, excellence. Faculty should explicitly show they have successfully been the primary supervisor for sustained pipeline of

extramurally funded Ph.D. students. Further, the ability of doctoral students to find placement in appropriate positions after graduation reflects favorably on a faculty member's overall reputation and impact in his/her field. Faculty are expected to facilitate this process as well.

3.3 Honors and Awards

Items in this category include election to senior status (e.g., "Fellow") in professional societies, awards bestowed by professional societies, and competitive national or international prizes. Certain research grant awards---such as the NSF Career and Sloan Foundation awards, and similar awards from other government and philanthropic agencies—that are attained through rigorous peer review systems also represent significant honors. Awards to students based on their publications and/or posters by professional societies are also considered part of faculty contribution to excellence in teaching, research and mentoring.

3.4 Editorial, Advisory, and Leadership Positions

This includes serving on editorial boards, scientific advisory boards, study sections, international committees, boards of directors, as an officer of a technical society, or in any other service activity that would signal recognition of accomplishment by the wider research community.

3.5 Invited Talks

An additional indicator of impact are invitations to deliver keynote/plenary lectures at or chair national/international conferences/symposia, invitations to give seminars at other research institutions, and invitations to contribute papers in the respected and visible proceedings.

3.6 Externally Funded Research

The ability to attract and sustain external funding is typically essential for maintaining an outstanding research program and hence is expected of an outstanding research-active faculty member. Failure to attract sponsored research often diminishes productivity and the ability to support graduate students.

3.7 Research Space

The College has a finite amount of research space allocated to it by the University. The College's research space is divided among the departments and the divisions and then assigned by individual departments based on the scale and scope of the investigator's research project. New faculty are assigned space based on the theoretical, computational, or experimental methods associated with their expected research group. In order to preserve flexibility for growth and new initiatives, occasional realignments of research space may be necessary. As with other aspects of faculty reviews, lab/research space should be periodically reviewed in conjunction with the faculty annual review.

Assessment of research space should be based on sustained research productivity. While each research area may vary somewhat, certain research attributes can be ready assessed. It is expected that each research lab obtains external funding to sustain all the operating expenses of

their lab. Further, the PI's grant funding should routinely fund graduate students in their lab. The research lab's publications should also be commensurate with the grant funding and research space. When it becomes apparent that research space is below the threshold necessary for sustained productivity, the department may realign space to bolster research growth and new initiatives.

3.8 Technology Transfer

Technology transfer, i.e. the moving of ideas from the laboratory to the world of commerce in a useful form, is an important part of knowledge dissemination and is therefore another indication of success in research. Faculty are highly encouraged to patent and license inventions, to form companies when appropriate, to serve on corporate advisory boards and to otherwise form industrial alliances, provided these activities are free of conflicts of interest. All outside activities that could potentially lead to a conflict of interest or the appearance of a conflict of interest must be disclosed in writing yearly to the College and the University.

4. Service

4.1 General Service Expectations

Service to the Department, Division, College, University, and the Profession is an important part of the mission of the College, and one in which tenured faculty are expected to show leadership. Certain service activities, such as student advising, attending faculty meetings, and the recruiting of students and new faculty members are expected of all faculty. Additional service is also expected, and the opportunities are varied but numerous. Some examples, in addition to those mentioned in Section 2.4, include serving on Division, Department, College and University committees, advising student societies such as IEEE, ASME, SME, SWE, and Tau Beta Pi, participation in recruitment activities such as visits to high schools, Fall open house programs, college outreach and service learning programs, and admissions conversion programs.

4.1.1 Diversity, Equity, and Inclusion (DEI) Service Expectations:

The College of Engineering is committed to the positive impact of diversity, equity and inclusion on our faculty, staff and students and on our educational and research excellence and on society at large. As such during annual merit review we will explicitly value a faculty member's service efforts to promote diversity and inclusion, and to work against racism and discrimination of any kind. Examples of activities include, but are not limited to a) organizing a symposium designed to promote diversity and inclusion, b) leading and participating in efforts to design and seek funding to broaden participation of URMs in all levels of Engineering, c) serving on the College Diversity & Inclusion Committee or Task Force, d) explicit service in support of organizations devoted to underrepresented groups, e) participating in and/or Organizing outreach activities explicitly designed to interface with URM students, and many others.
(see http://www.bu.edu/eng/about/inclusion-outreach/)

4.2 Professional Service

Tenure-track and tenured faculty are also expected to pursue professional service that serves to

enhance and/or recognize their leadership status in their discipline and research field. This is particularly the case for faculty post-tenure. Examples of such service include serving as peer reviewers for reputable journals, serving in editorial roles for high-quality journals, serving on review panels for funding agencies, serving a session chairs or related activities for scientific conferences, service on boards in professional organizations, and other similar activities that convey recognition of your leadership status in your field.

5 Allocation of Faculty Time

5.2 Allocation for Research-Active Faculty

Because of the nuances associated with funding sources for different engineering disciplines, the base teaching load for research-active tenured faculty is established at the department level in consultation with and with final approval from the Dean. Typical levels are three or four courses per academic year, depending on the specific department. This course load represents 80-90% of the faculty member's academic-year obligation. The remaining percentage of the faculty member's time is allocated to service, advising, and administration, to accommodate research, teaching loads may be reduced by the use of buyout (at 20-30% AY salary per course based on consultation with the department chair) from grant funds. Some departments might provide up to a single course release to research-active faculty without first requiring buyout, thus resulting in 2-3 courses as the faculty's course load. Again, the details of the policy are established at the department level. So that departmental teaching requirements can be given due consideration, requests for course buyout are not granted automatically but must be approved by the Department Chair. In some cases, the course load may be reduced without grant buyout at the discretion of the Department Chair, with the equivalent time allocated toward department-supported research, new course development, the running of large laboratories, or course support for other faculty.

Secondary Appointed faculty (formerly Participating faculty[1]) in one of the College's Divisions are subject to the same allocation of time outline above. However, secondary appointed faculty will coordinate their teaching assignments and buyouts with their chair in consultation with the cognate Division Head. Generally, secondary appointed faculty are obligated to teach one divisional course every academic year or every other year (depending on the specific nature of the agreement) and the remaining course load is determined by their department chair. The service component for secondary appointed faculty as outlined in section 4 also applies. Based on the specific course load of the faculty member, service to the division could be 5-10% in addition to the service to their department of 5-10%. Affiliated faculty[2] are not expected to teach for the division but can be active in any and all service opportunities and or student mentoring opportunities. Of course, affiliate faculty are welcome to seek a teaching or specific lecture contribution type of role in division courses.

[1] Participating Faculty – are faculty from any department in the College of Engineering, College of Arts and Sciences, School of Medicine, or School of Dentistry, that elect to teach and provide service to one of the College of Engineering's Divisions. Participation in divisional committees, student advising and mentoring of divisional graduate students, attendance at divisional colloquia, and collaboration on research initiatives is also expected.

[2] Affiliated Faculty - are scientifically associated with a division and primarily serve as advisors and thesis committee members but can avail themselves of all the participating faculty expectations with the exception of teaching.

5.3 Definition of Research-Active Faculty

Classification of a faculty as research active is determined by the Department Chair and reevaluated on a periodic basis in consultation with the individual faculty member. The following guidelines will apply: Classification as research-active will be based on demonstration of continued scholarly publication of papers of significance in referred journals, ongoing grant and contract proposal submissions and awards, active participation in multidisciplinary research programs, graduate student supervision and funding, or other tangible evidence of significant research activity.

5.4 Teaching Faculty

The course load for teaching faculty is six courses per academic year. Teaching faculty are often so designated at the time of their appointment and represent a separate employment track. Under certain circumstances, tenured-faculty can have their status changed to that of "teaching-faculty" or vice-versa depending on their research activity (see 5.5). Teaching faculty are allowed to engage in research or in the supervision of graduate students, but are primarily responsible for the high standards of teaching and education performance in all of their course assignments. Teaching faculty that are unable or unwilling to sustain quality teaching will be subject to salary review and/or dismissal depending on the circumstances and their tenure status.

5.5 New Tenure-Track Assistant Professors

New assistant professors normally teach a reduced course load during their first two years. Typically, this is no more than two courses per year for two years without requiring course buyout from research funding. Thereafter, these faculty are subject to the department's policy outlined in section 5.1 above and at the discretion of the chair. As is the case for tenured faculty, the number of courses taught per year even during year one can be reduced through the use of buyout. Initial teaching requirements for newly appointed, but more senior faculty members will be negotiated between the Department Chair and the candidate but will typically not be less than the teaching requirements for new assistant professors and may require buyout from existing funding to attain this course load level.

5.6 Change in Faculty Designation

A research-active faculty member who fails to sustain a vigorous research program may be changed to teaching faculty status by the Department Chair. Such a change will be accompanied by a commensurate increase in teaching responsibility. A faculty member in disagreement with such a decision has the option of appealing in writing to the Dean within 30 days of notification of the decision. A research-active faculty member can voluntarily change to teaching faculty status by notifying the Chair. Teaching active faculty will be judged at merit review time based on the quality of their teaching and service only. Teaching faculty that are unable or unwilling to sustain quality teaching will be subject to salary review and/or dismissal depending on the circumstances and their tenure status.

A teaching-track faculty member wishing to change to research-active status should submit to the Chair a proposal by which research progress can be measured. The proposal will be reviewed by the Chair and the Executive Committee and then submitted to the Dean for a final decision.

6 Promotion and Tenure

6.2 Promotion to Tenured Status

Tenure-track faculty are expected to demonstrate excellence in research and teaching and to carry out the service responsibilities that help to sustain these activities, including appropriate service to the field. At the time of application for tenure, the record of these activities will be reviewed independently by the faculty of the Department, its chair (with input from the division head if applicable), the College Tenure and Promotion committee, and the Dean of the College.

A tenure-track faculty member must apply for tenure no later than the spring of the sixth year following initial appointment. A schedule describing the sequence of events following the application is updated annually and is available from the Dean's office.

Tenure track faculty should be familiar with the University's "Guidelines for Preparation of Tenure Dossier and Review Schedule," which can be obtained from their departments. The preparation of the supporting materials described in the guidelines is crucial to the preparation of a tenure dossier. All relevant materials such as course syllabi, homework, quizzes, and examinations should be retained and catalogued in preparation of the tenure review.

6.3 Promotion to Full Professor Status (Tenured Research Active Faculty)

To merit promotion to Full Professor status, faculty are expected to demonstrate continued excellence in research, teaching, and service, as judged by the measures mentioned in previous sections, and to be active in the training of graduate students and post-doctoral fellows. Faculty must show a clear record of enhanced accomplishments in these areas since their most recent promotion to Associate Professor. While no formal time span is required before consideration for promotion, as a general guideline, 6 years past the promotion to tenured associate professor is typical. Consistent with University guidelines, promotion to Full Professor status in the College of Engineering also requires that the candidate be nationally and internationally recognized as a scholar of note in his/her field. Some indicators of international recognition included invited talks at international meetings, editorships of high-quality journals, fellowships in and highly visible awards from professional societies or honorary organizations, service on boards of directors and review panels, office positions in technical organizations, sustained, high-rate of high-impact publication, and consistent external support from competitive, peer-reviewed funding sources as PI. Outstanding, nationally recognized contributions to teaching and education, in addition to the scholarly work previously mentioned, are also indicators that a candidate merits Full Professor status.

No formal schedule for promotion to Full Professor status exists. An application for promotion is initiated by the Department Chair after discussions with the faculty member. Tenured Associate Professors should expect periodic oral or written reviews by the Chair in which the subject of promotion is discussed. External candidates hired at the rank of Full Professor are expected to have met the above standards before being hired at Boston University. Faculty that are participating in or are affiliated with a division can expect that the division head will provide input to the chair's application submission.

6.4 Promotion to Full Professor Status (Tenured Teaching Faculty)

Tenured faculty members who are designated as teaching faculty may still be considered for promotion to Full Professor. A faculty member in this category is still expected to perform scholarly work. However, their focus will be on educational research even though some faculty may still perform limited traditional research in addition to their educational research. Promotion will be based on their scholarly production and some indicators are invited talks at international meetings, editorships of high-quality journals, fellowships in and highly visible awards from professional societies or honorary organizations, service on boards of directors and review panels, office positions in technical organizations, sustained, high-rate of high-impact publication, and consistent external support from competitive, peer-reviewed funding sources as PI. While these indicators are similar to those in section 6.2, they differ in that the main focus is on teaching. Thereby, publications will be submitted to peer-reviewed journals that are specific to teaching and curriculum and training grants and other educational funding initiatives should be consistent and well established. The candidate is also expected to have been involved in major curriculum development and innovative teaching methodologies that have had a wider impact than just their own classroom. An individual seeking promotion in this category should also be nationally and internationally known for their scholarly contributions in educational research. Since the primary duties of this candidate is teaching, they should have amassed an impeccable record of teaching, mentoring and advising and have also provided the necessary service in leadership positions expected of a Full Professor.

No formal schedule for promotion to Full Professor status exists. An application for promotion is initiated by the Department Chair after discussions with the faculty member. Tenured Associate Professors should expect periodic oral or written reviews by the Chair in which the subject of promotion is discussed. Faculty that are participating in or are affiliated with a division can expect that the division head will provide input to the chair's application submission.

6.5 Promotion to Senior and Master Lecturer

Lecturers will be considered for promotion based on their overall teaching ability and service to the College. Standards similar to those outlined in the teaching faculty assessments will be used for promotion. Again, **s**ince the primary duties of this candidate is teaching, they should have amassed an impeccable record of teaching, mentoring and advising and have also provided the necessary service in leadership positions expected of a senior or master lecturer. Generally, those who have demonstrated excellence in these areas can be promoted to senior lecturer or master lecturer after at least five and ten years, respectively.

6.6 Promotion with Modified Titles

Associate Professors of the Practice receiving three-year appointments will be eligible for promotion to Full Professor of the Practice upon completion of their second full term appointment. Eligible faculty should submit a promotion review request through their chair to the Dean. Individuals seeking promotion will be reviewed based on their teaching evaluations, curriculum development, pedagogy enhancements, and service to the department while at Boston University. Any other educational initiatives including authoring textbooks will be considered during the review. The promotion process consists of a vote by the department faculty, review by the department Chair, review and vote by the College's APT Committee, and approval by the Dean. After promotion to Full

Professor of the Practice, the reappointment terms can be extended from three-year appointments to five years.

Assistant Research Professors and Associate Research Professors receiving three-year appointments will be eligible for promotion upon completion of their second full-term appointment in each rank. Eligible faculty should submit a promotion review request through their chair to the Dean. Individuals seeking promotion will be reviewed based on their scholarly accomplishments. A consistent record of high-quality publications, citations, grant funding, PhD supported research, presentations and invited talks commensurate with expectations for the professorial level being assessed are expected from researchers seeking promotion. The review will focus primarily on the scholarly production while at Boston University and since the last promotion. The promotion process consists of a vote by the department faculty, review by the department Chair, review and vote by the College's APT Committee, and approval by the Dean. After promotion to Full Research Professor the reappointment terms can be extended from three-year appointments to five years. All research professor appointments are subject to the availability of grant funding and may be reduced or rescinded for inadequate funding support.

Review

This administrative policy will be reviewed periodically and revised when deemed necessary by the Executive Committee of the College of Engineering. To minimize confusion with existing faculty expectations documents, this and subsequent versions will be identified by the published date located in the top right corner. This document will be available on the college web site and used by chairs, the academic promotions and tenure committee, and dean when evaluating performance, merit, and promotion. It will also be provided to new faculty.