Preamble
The Fischell Department of Bioengineering (the “Department”) at the University of Maryland aims to provide a quality engineering education and to conduct research at the forefront of the field. Our educational programs produce highly capable graduates with the fundamental knowledge and creativity, in both the biological sciences and engineering, which will prepare them for leadership roles in the greater society.

The Department provides students with graduate and undergraduate programs that have sufficient breadth in both fundamental and specialized engineering topics to ensure our graduates meet the current and future needs of humanity. In the area of research, the Department conducts a wide range of scientific research and establishes partnerships with government and industry, both in Maryland and elsewhere, to accomplish these goals.

The strategic mission of the Department is to educate and empower the next generation of bioengineers while developing and translating biological-based knowledge to address societal grand challenges.

I. Organization and Administration
The Fischell Department of Bioengineering carries out educational instruction, training, and research in the field of bioengineering. The Department is composed of tenured/tenure-track (TTK) faculty, professional track (PTK) faculty, affiliate faculty, adjunct faculty, staff, graduate students, and undergraduate students.

A TTK faculty member is defined as one who holds a tenured appointment or tenure-track faculty academic position in the Department at the rank of Assistant Professor, Associate Professor, or Professor.

A PTK faculty member is defined as one who holds a non-tenured faculty academic position in the Department. PTK titles include but are not limited to, Faculty Assistant, Post-Doctoral Associate, Faculty Specialist, Senior Faculty Specialist, Principal Faculty Specialist, Lecturer, Senior Lecturer, Principal Lecturer, Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, or Research Engineer.

An Affiliate faculty member is expected to be actively involved in research and/or educational programs in the Department. The exact roles and the expectations for active involvement must be addressed upon appointment and renewal. Affiliate faculty are appointed as per guidelines specified in Article VII. The appointment period is one year and renewable.

An Adjunct faculty member is expected to be actively involved in the research and educational programs in the Department. The exact roles and the expectations for active involvement must be addressed upon appointment and renewal. Appointments are per guidelines specified in Article VII. The appointment period is one year and renewable.
A staff member is defined as one who holds a non-academic appointment. These include full-time employees such as exempt, non-exempt, and contract staff in administrative and technical support roles.

An undergraduate student is defined as a full-time student officially registered at the University and enrolled in an undergraduate program of the Department, or a special student enrolled for at least nine (9) semester hours of courses offered by the Department.

A graduate student is defined as a student officially registered at the University and enrolled in either the Masters (M.Eng. or M.S.) or Ph.D. Bioengineering graduate program, or are enrolled in another University graduate program and are primarily advised by a faculty member with a TTK or PTK appointment in the Fischell Department of Bioengineering.

The Chair shall be a member of the University’s tenured faculty. The Chair is appointed by the Dean of the School of Engineering to a multi-year, renewable term in accordance with established University rules and procedures. The Chair reports to the Dean of the School of Engineering.

The Chair is the chief administrative officer of the Department and has responsibilities and powers assigned by the University. These include, but are not limited to, responsibility for the academic programs and the welfare of the students, the Department’s budget, appointment of department staff, submission of recommendations concerning faculty appointments, tenure and promotion, relations with the School, University, government, industry and alumni, and allocation and control of space and facilities.

The Chair is advised by the Faculty Assembly. With the advice of the Faculty Assembly, the Chair shall appoint all administrative officers and support staff to committees, and create ad-hoc committees as needed to assist in carrying out the assigned responsibilities. The Chair may appoint Associate Chairs to help manage specific academic programs or initiatives. These positions shall include but are not limited to, Associate Chairs for Graduate Studies and Associate Chairs for Undergraduate Studies.

II. Faculty Assembly

A. Membership

The Faculty Assembly will consist of the Chair, all Department TTK faculty, and senior-level Department PTK faculty (Senior Lecturer, Principal Lecturer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, or Research Engineer) as defined in Article I.

B. Officers

The officers of the Faculty Assembly shall be the Chair and Secretary. The Department Chair shall be the Chair of the Faculty Assembly. The Secretary shall be appointed by the Department Chair annually and is typically an administrative staff member. The terms of office shall begin at the start of the academic year. The Secretary shall post a membership list of all committees.

C. Meetings

1. The Faculty Assembly may hold regularly scheduled meetings ("Department Meetings") throughout the calendar year at a time and place designated by the Department Chair.
2. The Faculty Assembly shall hold at least two regular meetings each semester at a time and place designated by the Department Chair. Additional meetings may be called by written request to the Department Chair by at least one-third (1/3) of the Faculty
Assembly. All members of the Faculty Assembly shall be notified of any upcoming meeting one week prior to the meeting.

3. Under special circumstances, one-third (1/3) of the faculty can meet and call a Faculty Assembly meeting independent of the Department Chair. Under this special circumstance, the Chair of the Faculty Assembly should be elected from within the faculty and will serve for a year to handle this and any subsequent cases.

4. Guests, including Departmental staff members, may be invited to meetings of the Faculty Assembly by the Department Chair or members of the Faculty Assembly, but cannot vote on matters discussed by the Faculty Assembly.

5. Minutes of each meeting shall be communicated by the Secretary to each member of the Faculty Assembly within two weeks after the meeting.

**D. Functions**

The functions of the Faculty Assembly shall include the following:

1. To act as the electorate and referendum body of the faculty of the Fischell Department of Bioengineering.

2. To consider and vote on amendments to the Plan of Organization of the Fischell Department of Bioengineering, as specified in Article IX.

3. To identify matters of concern to the Fischell Department of Bioengineering that shall be included in the agenda of their next regular meeting.

4. To advise the Department Chair either upon request or by its own initiative, on any matter of concern to the Department.

5. To receive information of general interest from the Department Chair.

6. To elect members to standing and ad-hoc committees of the Department other than those designated by the Chair.

7. To advise the Department Chair and the Dean regarding all appointments, promotions, and grants of tenure.

**E. Departmental Committees and Committee Memberships**

1. **Departmental Committees**

   Standing committees are defined by this Plan of Organization. Department standing committees are advisory to the Department Chair and the Fischell Department Faculty Assembly. Ad-hoc committees can be established to perform special tasks, as needed.

   a. **Faculty Affairs Committee:** This committee consists of at least two faculty members and an academic staff member. The Committee shall oversee concerns related to the career development of the Department Faculty, including appointments, promotion, tenure, annual review, 3-year review, post-tenure review, merit review, and human relations and welfare. This committee will act as / help comprise the Departmental Human Relations and Welfare Committee, APT Subcommittee, and Department Merit Committee.

      i. **Human Relations and Welfare Committee:** This committee is concerned with matters of departmental compliance with the Human Relations Codes and Affirmative Action Plans of the University and resolution of individual grievances within the Department, as described in Article VIII.

      ii. **APT Subcommittee:** A full description of this committee is described in Article IV.

      iii. **Merit Pay Committee:** This committee consists of five elected faculty, with at least one from each rank. The committee reviews and evaluates the Faculty Review Forms, which are submitted by the faculty at the end of every calendar year. This evaluation is then provided to the Chair for interpretation. The committee should follow the guidelines provided in the Merit Pay Distribution Plan (Appendix D).
b. **Graduate Studies Committee:** This committee consists of the Associate Chair for Graduate Studies, at least two faculty members, and an academic staff member. The committee shall oversee recruitment and admissions of graduate students, the progress of each student towards degrees, TA responsibilities and fulfillment, and the assignment of assistantships and fellowships when available. This committee shall conduct the qualifying exam and address other graduate issues, such as proposal review for new graduate courses and scheduling of graduate classes.

c. **Research Committee:** This committee consists of the Associate Chair for Research (if established and occupied), at least two faculty members, and an academic staff member. The committee will guide strategic decisions regarding the Department’s research endeavors.

d. **Undergraduate Studies Committee:** This committee consists of the Associate Chair for Undergraduate Studies, at least two faculty members, and an academic staff member. The committee shall work for accreditation on an on-going basis and make recommendations to the faculty and the Chair for improvements. The committee shall ensure that the ABET requirements are satisfied and that the necessary material for ABET reviews is collected. The committee shall also explore new ways to connect the undergraduate program with constituencies and address other undergraduate issues, such as special requests for course substitution or transfer, student retention, and scheduling classes to meet student needs for graduation.

e. **Ad-Hoc Committees:** Ad-Hoc Committees shall be created by the Chair for specific tasks, and shall cease operation when those tasks are completed. Members of the Ad-Hoc Committees shall be selected by the Chair. Ad-Hoc Committees shall develop their own internal procedures consistent with their missions and meet as often as necessary.

2. An annual election of members of the Departmental Committees shall be held at the beginning of the fall semester. A simple majority of the members of the Faculty Assembly shall constitute a quorum, and is required for the annual election. Nominations for all elected positions in standing and ad-hoc committees originate from the floor, including nomination by the Department Chair. Nominations for entire committee memberships are acceptable. Nominations must be accepted either verbally or electronically prior to election. The ballot shall be prepared immediately and circulated to all voting members present. Election results shall be validated and reported by the Secretary of the Faculty Assembly. Special elections including those needed to fill vacant elected positions shall be scheduled by the Department Chair.

3. **Representatives:** Representatives present the Department’s perspective and position to bodies throughout the University of Maryland campus. Representatives include, but are not limited to, the following:
   a. **Senate Representatives.** One faculty member represents the Department at the University Senate.
   b. **Engineering Senate.** One faculty member represents the Department at the School of Engineering Senate.
   c. **School Appointments Promotion and Tenure (APT) Committee.** One representative at each rank of Associate Professor and Professor serves as a member of the School of Engineering’s APT Committee.
   d. **School Program Curricula and Courses (PCC) Committee.** One faculty member represents the Department at the PCC Committee.

F. **Order of Business**
The business of each meeting of the Faculty Assembly shall be conducted in the following order: (1) call to order; (2) approval of minutes of the previous meeting; (3) report of the Department Chair on departmental activities; (4) new business; (5) adjournment. Parliamentary procedure shall follow the latest edition of Robert’s Rules of Order.

G. Voting
Voting on all items of business, except APT (see Article IV), which come before the Faculty Assembly shall normally be by voice or show-of-hand. Written ballots may be adopted by mutual consent. Approval of motions requires a simple majority of those eligible to vote. Absentee ballots will be accepted by the Department Chair provided that the motion has been circulated at least one week before the meeting and remains unchanged. Those eligible to vote on any particular issue are defined as, “those present and voting plus those submitting absentee ballots.” Special exceptions to this voting rule may be determined by the Faculty Assembly as needed. Approval of an exception will be by written-ballot and will require at least a two-thirds (2/3) majority of the voting members of the Faculty Assembly.

III. Staff Assembly, Undergraduate Student Assembly, and Graduate Student Assembly
A. Membership
The staff assembly, undergraduate student assembly, and graduate student assembly consist, respectively, of all the staff, undergraduate students, and graduate students as specified in Article I of this Plan of Organization.

B. Functions
The staff assembly, undergraduate student assembly, and graduate student assembly of the Department shall act as the electorate in Department, School, and Campus elections in which the members of the constituent assembly are entitled to vote, and to select, where applicable, their own candidates for any such election.

C. Organization and Meetings
Each Department constituent assembly (staff assembly, undergraduate student assembly, and graduate student assembly) shall be entitled to formulate and operate under its own plan of organization. Any such plan of organization shall be filed with the Department Chair. The staff assembly, undergraduate student assembly, and graduate student assembly need not hold regularly scheduled meetings. Upon petition of twenty percent (20%) of the membership of any one assembly, the Department Chair shall call and attend a meeting if the assembly has no Chair at that time. The place, date, and time of these meetings shall be announced by the Department Chair at least two weeks prior to the meetings.

IV. Departmental APT Committee and APT Subcommittee Composition and Procedures
The Department will establish both a Departmental APT Committee and an APT Subcommittee. The Departmental APT generally acts to review cases for promotion and/or tenure as well as vote on these cases. The APT Subcommittee acts, in concert with the candidate, to assemble the documentation required for the applying for promotion and/or tenure.

A. Membership of the Departmental APT Committee
Members of the Departmental APT Committee shall be as follows (noting that the candidate for promotion and/or tenure does not participate in discussion or voting of the candidate’s own case):
1. For consideration of new appointments to the Department Faculty at the rank of Assistant Professor, all full-time tenured and tenure-track faculty in the Department are members of the Departmental APT Committee.
2. For consideration of new appointments or promotions within the Department Faculty to the rank of Associate Professor, with or without tenure, all full-time tenured faculty in
the Department holding the rank of Associate Professor or Professor are members of the Departmental APT Committee.

3. For consideration of new appointments or promotions within the Department Faculty to the rank of Professor with tenure, all full-time tenured faculty in the Department holding the rank of Professor are members of the Departmental APT Committee.

4. For consideration of new appointments or promotions of all PTK, the membership of the Departmental APT Committee is defined in Appendix C, noting that the membership differs among the various PTK titles.

5. Faculty who are currently on official leave of absence from the University are not members of the Departmental APT Committee.

B. Meetings of the Departmental APT Committee
The Departmental APT Committee shall meet as required to consider new appointments and/or promotions with the Department. At least one week’s notice shall be given prior to each meeting.

C. Quorum of the Departmental APT Committee
In order to constitute a quorum of the Departmental APT Committee meetings, at least a two-thirds (2/3) of the Departmental APT Committee members must be in attendance.

D. Voting of the Departmental APT Committee
1. The APT Subcommittee Chair shall designate responsibility for the tabulation of the results of all voting prior to each meeting, typically to an administrative staff member.

2. The voting procedure will be as follows: 1) after the presentation of a report on the candidate’s merits by the APT Subcommittee Chair, the committee will discuss the candidate’s case until all the faculty present express their opinion/concern on the candidate; 2) the formal and final vote will be conducted via secret written ballot; 3) absentee ballots received by the Subcommittee Chair prior to the meeting shall be included in the results of the formal vote.

3. If multiple candidates are to be considered in a single meeting, then each candidate shall be considered completely and voted upon individually; the candidates shall be ordered by rank.

4. A passing vote for the promotion/appointment of the candidate requires a simple majority of the total votes.

5. For voting on PTK appointments or promotions, the procedures and policies are defined in Appendix C, noting that these procedures and policies differ among the various PTK titles.

E. APT Subcommittee
1. The function of the APT Subcommittee, as defined by the School of Engineering and University APT guidelines, shall be to solicit relevant information and peer review letters of assessment of the candidates, and to assemble and organize a dossier about a candidate and present the candidate to the Departmental APT Committee.

2. The Department Chair shall establish an APT Subcommittee, including an APT Subcommittee Chair, for each promotion case.
   a. Each APT Subcommittee shall consist of at least three faculty members elected by the Faculty Assembly.
   b. Members of the APT Subcommittee will generally be derived from the Faculty Affairs Committee, and may also be suggested by the candidate particularly so that the Subcommittee has at least one member who has the same title classification as the candidate.
   c. The candidate may not be on the APT Subcommittee.
3. The APT Subcommittee shall meet as required to consider new appointments and/or promotions with the Department. At least one week's notice shall be given prior to each meeting.

4. In order to constitute a quorum of the APT Subcommittee meetings, at least a two-thirds (2/3) of the APT Subcommittee members must be in attendance.

V. Tenure / Tenure-Track (TTK) Appointment, Promotion, Tenure, and Review Procedures
   A. All new hires will receive a copy of this Plan of Organization, including appointment, promotion, tenure, and review procedures, or will be provided the URL where this policy can be found.
   B. All members of the faculty who are candidates for promotion and tenure, and those individuals who are being considered for appointment in a tenure-track or tenured position, shall be evaluated on their teaching, research, and service accomplishments. Procedures for TTK Faculty are defined in Appendix A and Appendix B.
   C. The annual review will begin in the spring of each year, with the collection of data and self-evaluation from each faculty member. After consideration by the Faculty Affairs Committee, the annual review will end with a distribution of reports to each faculty member, and can include a meeting with the Department Chair, in the summer of each year.
   D. The promotion process will begin with the Department Chair distributing an invitation to apply for promotion in the spring of each year. Promotion dossiers should be constructed and submitted to the Departmental APT Committee in early summer. The Department APT Committee will typically vote on each case in early fall, and will then be followed by School and Campus reviews. Promotion decisions are typically disseminated at the end of the academic year.

VI. Professional Track (PTK) Appointment, Evaluation, and Promotion Procedures
   A. All new hires will receive a copy of this Plan of Organization, including appointment, evaluation, and promotion procedures, or will be provided the URL where this policy can be found.
   B. All members of the faculty who are candidates for promotion and those individuals who are being considered for appointment in a professional track position shall be evaluated on their teaching, research, and service accomplishments, as appropriate. Procedures for PTK Faculty are defined in Appendix C.
   C. The annual review will begin in the spring of each year, with the collection of data and self-evaluation from each faculty member. After consideration by the Faculty Affairs Committee, the annual review will end with a distribution of reports to each faculty member, and can include a meeting with the Department Chair, in the summer of each year.
   D. The promotion process will begin with the Department Chair distributing an invitation to apply for promotion in the spring of each year. Promotion dossiers should be constructed and submitted to the Departmental APT Committee in early summer. The Department APT Committee will typically vote on each case in early fall, and will then be followed by School and Campus reviews, when appropriate. Promotion decisions are typically disseminated at the end of the academic year.

VII. Affiliate and Adjunct Faculty Appointments
Individuals may be added to the faculty by appointment as Affiliate or Adjunct members as specified in University guidelines.

   A. Affiliate
      For consideration of appointments to the Department Faculty at the rank of Affiliate Assistant Professor, Affiliate Associate Professor, and Affiliate Professor, all full-time
tenured and tenure-track faculty in the Department shall vote. The rank, Assistant Professor, Associate Professor, or Professor, shall be consistent with University policies, guidelines, and current status of nominee. The expectations of the nominated affiliate faculty member shall be specified in a nomination letter, which is to be sponsored by at least one member of the Faculty Assembly. The letter and complete curriculum vita are needed for review and vote. The result of this vote shall be forwarded to the Department Chair and to the Dean.

B. Adjunct
For consideration of appointments to the Department Faculty at the rank of Adjunct Assistant Professor, Adjunct Associate Professor, and Adjunct Professor, all full-time tenured and tenure-track faculty in the Department shall vote. The rank, Assistant Professor, Associate Professor, or Professor, shall be consistent with University policies, guidelines, and current status of nominee. The expectations of the nominated adjunct faculty member shall be specified in a nomination letter, which is to be sponsored by at least one member of the Faculty Assembly. The letter and complete curriculum vita are needed for review and vote. The result of this vote shall be forwarded to the Department Chair and to the Dean.

C. Voting
For Affiliate and Adjunct appointments, both in-person and electronic voting are acceptable. If an in-person meeting is held, it should begin with calling a meeting of the Faculty Assembly. A simple majority of the members of the Faculty Assembly shall constitute a quorum, and is required for voting (whether in-person or electronic). The meeting is conducted in following order: 1) call to order; 2) review, discuss and vote on new appointments; 3) announcement of results of vote; and 4) adjournment.

VIII. Human Relations and Welfare
Matters of departmental compliance with the Human Relations Codes and Affirmative Action Plans of the University and resolution of individual grievances within the Department are coordinated by the Faculty Affairs Committee, which is a standing departmental committee. The functions of the committee specifically include the following: to review annually the Department's Affirmative Action Plan and forward appropriate recommendations to the Department Chair to seek ways of resolving grievances brought to its attention, following the established campus policies and cognizant organizations; to seek ways and means by which the Department can ensure that employment within the Department is open to all qualified persons, regardless of sex, color, creed, national origin, or physical handicap, and that practices which may create barriers to equal education and employment opportunities be eliminated; to make appropriate recommendations in support of the Department's Affirmative Action Plan.

IX. Amendments
The Plan of Organization will be reviewed once every four years. Proposed amendments of the Plan of Organization may be introduced by the Department Chair, or by a written petition signed by at least one-fourth (1/4) of the faculty in the Department. The proposed amendments to the Plan of Organization shall be placed on the agenda of the next regular meeting of the Faculty Assembly, provided that the Faculty is given two weeks written notice of the text of the proposed amendment. Amendments regarding Appointment, Promotion, Tenure, and Review of Tenure / Tenure Track Faculty (Appendix A) and Evaluation of Post Tenure Faculty (Appendix B) can only be proposed by, and voted upon by, TTK Faculty. Approval of a recommended amendment by at least a two-thirds (2/3) majority, written-ballot vote of the voting members of the faculty assembly present shall constitute adoption of the amendment. Absentee ballots shall be valid provided that the amendment as circulated remains unchanged by action of the Faculty Assembly in the meeting.
X. *Ratification of Plan*

The amended plan of organization becomes effective when it has been approved by at least a two-thirds (2/3) majority at a meeting of the Faculty Assembly.
APPENDIX A

APPOINTMENT, PROMOTION, TENURE, AND REVIEW OF TENURE / TENURE TRACK FACULTY

I. Criteria for Promotion and Tenure of Tenure / Tenure Track Faculty
The criteria to be considered in promotion and tenure fall into three general categories.
- Research and scholarship.
- Teaching, advising, and mentoring of students.
- Service to the university, the profession, and the community.
The first two categories overlap significantly and have the highest importance. There is also overlap in the evaluation of research and service, since many types of professional service, such as service on editorial boards or proposal peer-review panels and study sections, are also indications of research performance.

A. Research and Scholarship
Factors to be considered in evaluating the quality of research and scholarship should include the following.
- Publication of research.
- Peer-reviewed publications in archival journals of high impact.
- Papers in refereed conference proceedings.
- Patents and other publications.
- Other evidence of research.
- Peer-reviewed external grants and contracts.
- Invited seminars, meeting keynote presentations, lectures.
- A sustained funded program appropriate to the candidate's research interests.
- Participation in peer-review research panels and study sections.
- Other forms of peer recognition of the importance of the candidate's research.
- Graduation and placement of Ph.D. students.
The quality of each endeavor is of the most importance. Quality must be carefully documented and is more important than quantity. Quality refers to the insights, significance, and importance of the work, as indicated by the stature of the journal in which it is published, its citations, resultant seminars/keynotes, and placement of students and researchers. Unrefereed papers may be much weaker indicators of research accomplishment. Collaboration, while not required, is viewed as a means of productive scholarship. Clearly, the quality of the result and relative contributions of the participants must be weighed. Documentation of the role and contribution of the candidate is expected for collaborative efforts. Evidence of documentation of effective scholarship include: citations in scholarly and professional books and journals, the salience of journal stature, or other forms of recognition by colleagues in the field. Documentation of the quality of journals and other outlets is expected.
The quantity of published material is important, but to a lesser extent than quality. The volume of activity is not, by itself, a positive indicator of scholarly activity. A high quantity of high quality work is desired.
Although external research funding is important to sustain a research program, a large volume of external funding is not a sufficient indicator of good research quality, nor is a moderate volume of funding an indicator of mediocre research quality. The evaluation of research funding must take into account what the candidate accomplished with the acquired grants, as well as the way in which these grants were awarded. Research grants solicited and those awarded on the basis of the scholarly and peer-reviewed merits of the
proposal, such as grants awarded from the DoD, DoE, EPA, NIH, NSF, USDA, and other independent foundations are definite indications of quality scholarship.

1. **Promotion to the Rank of Associate Professor with Tenure**
   The candidate should have established a successful and sustainable research program, with high potential for influential accomplishments. The candidate should have recent publications in high impact refereed journals and, if appropriate, premier refereed conference proceedings. The quality of the published papers should be evident in the comments of the external evaluators. The candidate must have demonstrated the ability to develop a competitive research program.

2. **Promotion to the Rank of Professor**
   The candidate should have established a successful and sustainable research program, with demonstrated influential accomplishments, such as published results and external grants, and graduation and placement of Ph.D. students and postdoctoral research associates. The candidate should have a sustained record of publications (including recent) in high impact refereed journals and, if appropriate, premier refereed conference proceedings. The distinguished scholarly activity and high quality of the published papers should be clear in the comments of the external evaluators. The candidate must have demonstrated the ability to lead a nationally and internationally recognized research program.

B. **Teaching, Advisement, and Mentoring**

Factors to be considered in evaluating the quality of teaching, advisement, and mentoring should include the following.

- Supervision of graduate students.
- Attainment of Ph.D. candidacy by doctoral advisees.
- Completion of M.S. theses and Ph.D. dissertations by advisees.
- Teaching effectiveness in undergraduate and graduate courses.
- Development of new courses and enhancement/modernization of existing courses.
- Teaching evaluation by peers.
- Advisement of undergraduate students.
- Outreach educational activities, such as tutorials at conferences or courses for industry.
- Participation in thesis and dissertation committees.

The quality of teaching is of the highest importance; quantity, while important, is determined by standards set forth by the university for numbers of courses taught. Quality of student advisement and the number of student advisees is also an important factor. Due weight should be given the number of advisees completing degrees under the adviser’s supervision and the number in progress. Of major importance are the faculty member’s availability and mentoring of students. Consideration should also be given to the number of completed doctoral dissertations and master’s theses committees on which the candidate has served as both chair and a member.

1. **Promotion to the Rank of Associate Professor with Tenure**
   The candidate should have established the foundations of a successful teaching track record and of advisement activities, demonstrating abilities to excel in the activities listed above. The supervision of doctoral students who have attained candidacy and have made substantial progress towards, or have already completed their Ph.D. under the candidate’s supervision is an important activity.

2. **Promotion to the Rank of Professor**
   The candidate should have demonstrated a sustained high-quality track record of teaching and advisement activities and should have excelled in the activities listed
above. The supervision of doctoral students who have already completed their Ph.D. under the candidate’s supervision is an important activity.

C. Service
Factors to be considered in evaluating the quality of service activities should include:

- Service to the Department.
- Service to the Clark School of Engineering.
- Service to the Campus.
- Service to the candidate’s profession, such as to professional societies.
- Service to Federal, State, and local governments, as well as the community.
- Interaction with industry and external research organizations.
- Service on editorial boards of archival journals and major conference program committees.

Participation in committees and in other service capacities should be accompanied by specific accomplishments. The level and frequency and stature of participation will be considered. The impact of service on the group served is of critical importance in evaluating the quality of service.

1. Promotion to the Rank of Associate Professor with Tenure
The candidate’s contributions to service activities should be apparent. Service activity shall not be expected nor required of junior faculty to the point that it interferes with the development of their teaching and/or research.

2. Promotion to the Rank of Professor
The candidate’s contributions to service activities should be established, and a commitment to the University and profession should be clearly evident. The candidate’s service should indicate a positive and influential contribution to his/her Department and must have made substantial contributions to his/her profession.

II. Tenure-Track Faculty Annual Reviews
A. Each tenure-track faculty member must receive an annual written review from the Department Chair each year.

B. The review shall provide feedback about the faculty member’s progress in the areas of teaching, and creative and/or research contributions, advice and guidance regarding actions that might further career goals, along with any recommendations for changes in activities and focus.

C. The review should include an evaluation from the Faculty Affairs Committee, based upon data and a self-evaluation provided by each faculty member.

D. For those tenure-track faculty who are on a three (3) year initial contract (prior to tenure), a formal contract renewal review should occur at the end of the faculty member’s third year, the written results of which will be forwarded to the faculty member and the Dean. The reviews shall remain part of the faculty member’s file. In the case of contract renewal, the result of the review shall be a written assessment of progress toward tenure, including specific recommendations regarding areas of identified weakness. If the review results in a decision not to renew the contract, a written explanation of the reasons for the decision must be prepared.

III. Post Tenure Faculty Reviews
Each tenured Associate Professor must receive a formal intermediate review of the progress towards meeting the criteria for promotion to the rank of Professor no later than the fifth year of a tenured Associate Professor’s appointment and every five years thereafter. Each tenured
Professor must receive a formal review every five years. Post-tenure review guidelines provided by the campus supersede Department guidelines. See Appendix B for details.

IV. Mentoring
Each Assistant Professor and untenured Associate Professor will be mentored by one or more members of the senior faculty, other than the Chair of the Department. The mentors for each faculty will be assigned by the Chair, in consultation with the faculty member. Mentors should encourage, support, and assist these faculty members and be available for consultation on matters of professional development. Favorable informal assessments and positive comments by mentors are purely advisory to the faculty member and do not guarantee a favorable tenure and/or promotion decision. In addition, the Department Chair will perform annual informal reviews of the accomplishments of all Assistant Professors and untenured Associate Professors, including input from the assigned mentors.
APPENDIX B

EVALUATION OF POST-TENURE FACULTY

I. Introduction
In 1995, the University adopted Policy II-1.20(A) on the Periodic Evaluation of Faculty Performance, to facilitate the continued professional development of tenured faculty members. This policy was revised in 1998 in accordance with the requirements of the USM Policy on the Comprehensive Review of Tenured Faculty (19.0 II-1.19). The purpose of comprehensive post-tenure review is to enhance the professional and scholarly productivity of the tenured faculty, recognizing both meritorious performance and/or problematic situations as they may emerge. Such post-tenure reviews supplement other periodic evaluative reviews, such as annual merit reviews. The present guidelines have been adapted from the Provost’s memorandum dated September 18, 2013, with added procedures relevant to the Clark School of Engineering process.

II. Frequency of Evaluations
A. Comprehensive post-tenure reviews of each tenured faculty member must occur no less frequently than every five (5) years (USM Policy 19.0 II-1.19.5). Units can stagger comprehensive reviews so that all reviews do not coincide in the same year. Faculty with longer service since their last tenure or promotion review should be reviewed first.

B. Periodic reviews may consist of standard merit reviews (normally spanning 3 years of data) or any other relevant evaluative review leading to contract renewal. Units may determine the frequency of such periodic reviews, to conduct them either annually or bi-annually. In addition to every five (5) years, two consecutive [periodic] reviews that indicate that a faculty member is materially deficient in meeting expectations shall occasion an immediate comprehensive review (USM Policy 19.0 II-1.19.5).

III. Required Elements of Post-Tenure Review
A. Timeline for Evaluation
No less frequently than every five (5) years, or if two consecutive periodic reviews indicate that the faculty member does not meet expectations. If the faculty member has an approved sabbatical or other leave, then the comprehensive review shall be delayed for the period of the leave.

B. Review Committee
1. The review should be conducted consistent with the general principles of peer review (USM Policy 19.0 II-1.19.3). The Post-Tenure Review Committee shall consist of at least 3 tenured faculty at or above the rank of the faculty member being reviewed. The Post-Tenure Review Committee shall be elected representatives of the Faculty Assembly as specified by the department’s Plan of Organization. The Post-Tenure Review Committee will typically be constituted by the Departmental Faculty Affairs Committee.

2. If there are fewer than three (3) eligible faculty members in the department, the Dean shall appoint one or more eligible faculty members from related units as voting members of the Post-Tenure Review Committee.

C. Post-Tenure Review Portfolio
The portfolio shall include:
1. Curriculum vita.
2. Professional statement.
3. Teaching portfolio, including a summary of instructional activities, course enrollments, and student evaluations.
4. The five (5) most recent annual review reports.
D. **Evaluative Report**
   A written “peer appraisal” report and overall categorical rating, such as outstanding, satisfactory, and unsatisfactory, are recommended.

E. **Description of the Process and Timeframes**
   1. Portfolio of materials is submitted to Post-Tenure Review Committee.
   2. Post-Tenure Review Committee submits peer-authored written report to faculty member.
   3. Faculty member submits optional written response to the Post-Tenure Review Committee within 14 calendar days of receipt of the appraisal.
   4. The faculty portfolio, including the optional written response, is submitted to the department Chair.
   5. Faculty member meets with Department Chair to discuss final evaluation.
   6. If deemed appropriate by the Department Chair, faculty member and Department Chair discuss and agree on a firm written development plan, with timetable, for enhancing meritorious work and a procedure for evaluation of progress at fixed intervals. Development/outcomes plan must be summarized in a written report signed by both the faculty member and the administrator.
   7. Department Chair issues final evaluation.
   8. The final evaluation and development/outcomes plan should be forwarded to the Dean. The portfolio is made available for the Dean’s review, upon request.
   9. Notification of the outcome of the review should be sent to the Office of Faculty Affairs by the Dean.

F. **Appeal Procedures**
   1. In the event the faculty member disagrees with the final evaluation, a written appeal may be filed with the Dean.
   2. The Dean must review the portfolio, the peer-authored written report, the faculty member’s optional written response, the Department Chair’s final written evaluation, and the faculty member’s written appeal, and then meet separately with the faculty member and the Department Chair to discuss the evaluation.
   3. The Dean should issue a decision on the appeal. No further appeal can be granted.
   4. Following completion of the appeal, if any, a notification of completion of the review should be sent to the Office of Faculty Affairs by the Dean.

G. **Notice of Where Evaluation Reports are Maintained**
   All materials relating to the comprehensive post-tenure review are maintained in the faculty member’s personnel file in the department. The Dean’s office maintains the reports.
APPENDIX C

APPOINTMENT, EVALUATION, AND PROMOTION OF PROFESSIONAL TRACK FACULTY

The purpose of this document is to establish policies for appointment, evaluation, and promotion of professional track faculty within the Fischell Department of Bioengineering.

All changes and amendments to this unit-level policy shall be created by a committee which will include voting representation from current PTK faculty, tenured/tenure-track faculty, and unit administrators.

I. Policies that Apply to Appointments, Evaluations and Promotions at All Ranks
   A. When issuing contracts to PTK faculty, the Department will utilize the University’s online contract management system to ensure that contracts contain necessary elements, including a clear description of assignments and expectations associated with the appointment, as well as information on how to access unit-level PTK faculty policies and professional resources.
   B. The Department will use faculty titles that are appropriate and correspond to the majority of the appointee’s effort as explained below for each rank and title. The description of the appointee’s assignments and expectations that is included in the contract should be consistent with the criteria for the proposed rank.
   C. The Unit-level and School-level policies, procedures and criteria for professional track faculty will be made available and communicated to all PTK faculty upon their hiring or initial appointment.
   D. Decisions on promotion shall be made based on the evaluation criteria detailed below and the reviewee’s performance.
   E. The Department does not have expectations for minimum/maximum/typical time in rank for any position. Supervisors are permitted to set expectations related to appropriate time in rank between evaluations for promotion, but such expectations shall not preclude a faculty member from seeking to be reviewed early or from opting not to be reviewed.
   F. PTK faculty will be notified by email of all promotion decisions by the Department Chair at each level of review.
   G. Negative promotion decisions for PTK faculty do not preclude renewal of the existing PTK faculty appointment at the present rank. Promotions may not be rescinded.
   H. A faculty member may appeal a negative decision based on alleged violations of procedural due process that would have had a material effect on the decision. All appeals shall be handled according to the procedures established by the Provost’s Office of Faculty Affairs and shall be initiated within the period defined in those procedures.
   I. When the PTK faculty member has an appointment that is shared between more than one unit, the chairs or directors of the participating units will designate one unit to serve as the home unit for the purpose of appointment and promotion decisions. This decision should be made at the time of appointment and clearly communicated to the faculty member. In such cases, a supporting letter from the chair/director (or designee) of the secondary unit should accompany the candidate’s dossier.
   J. Wherever possible, the Department will provide progressively longer contracts to PTK faculty, in accordance with the University of Maryland Guidelines for Appointment, Evaluation, and Promotion of Professional Track Faculty.

II. Criteria for Mentorship of Professional Track Faculty (all roles)
A. The Department recognizes that the specific need for mentorship of Professional Track Faculty will vary, depending on their current career stage and future objectives. Accordingly, the Department will work with each individual faculty member according to his/her job description, specific day to day duties, and career goals to establish an appropriate mentorship plan.

B. The Department Chair will facilitate the assignment of a mentor to all Professional Track Faculty as appropriate and/or desired. This mentor will be someone other than the appointee’s direct supervisor, and preferably a PTK faculty member within the appointee’s track but at a higher rank.

C. All Professional Track Faculty will be provided with full access to all career development programs established by the Department and the University.

III. Professional Track Faculty with Faculty Assistant Roles (Faculty Assistant)

A. Criteria for Appointment to Professional Track Faculty Assistant Roles (Faculty Assistant)

1. Initial appointments at the Faculty Assistant level may be made at the discretion of the Chair and do not require voting by faculty or School-level review (Table 1). The appointee shall be capable of assisting faculty in any dimension of academic activity and shall have ability and training adequate to the carrying out of the particular techniques required, the assembling of data, and the use and care of any specialized apparatus. A Bachelor’s degree shall be the minimum requirement. Appointments to this rank are typically for terms of one (1) to three (3) years and are renewable for up to three (3) years.

2. A PTK faculty may be moved from a Faculty Assistant position to a Faculty Specialist position at any time, as long as the individual satisfies the criteria for the Faculty Specialist (outlined in Section IV.A.1) or has served satisfactorily for three (3) years at this title and meets their Department’s established criteria. This will not be considered a promotion.

3. Since the Faculty Assistant positions are limited to a three (3) year term, at the end of the term, the individual will either need to be terminated, moved to another Faculty position (such as Faculty Specialist), or compete for an Exempt position. Anyone with less than a ‘Satisfactory’ rating from the immediate supervisor should not be moved to another faculty position.

B. Criteria for Evaluation of Professional Track Faculty in Assistant Roles (Faculty Assistant)

1. Faculty Assistants will be evaluated annually solely by their immediate supervisor. This review should be organized by the supervisor and the individual, although it is suggested that the review contains both a self-evaluation (by the individual) and a performance evaluation (by the supervisor). The supervisor must submit the review documents to the Chair of the Fischell Department of Bioengineering. It is noted that the individual has the right to appeal any annual review by submitting a formal letter to the Chair and further to the Faculty Ombuds Officer.

IV. Professional Track Faculty with Post-Doctoral Associate Roles (Post-Doctoral Associate)

A. Criteria for the Appointment of Professional Track Faculty with Post-Doctoral Associate Roles

1. Initial appointments at the Post-Doctoral Associate level may be made at the discretion of the Chair and do not require voting by faculty or School-level review (Table 1). The appointee generally shall hold a doctorate in a field of specialization earned within five (5) years of initial appointment. The appointee will pursue advanced training and
research under the direction of a faculty member. The appointee shall have training in research procedures, be capable of carrying out individual research or collaborating in group research at the advanced level, and have the experience and specialized training necessary for success in such research projects as may be undertaken. Appointments are typically for one (1) to three (3) years and are renewable, provided the maximum consecutive length of service in both post-doctoral ranks shall not exceed six (6) years. After six (6) years in the post-doctoral ranks, appointees who have performed satisfactorily are eligible for appointment to an appropriate faculty position.

B. Criteria for Evaluation of Professional Track Faculty with Post-Doctoral Associate Roles

1. Post-Doctoral Associates will be evaluated annually solely by their immediate supervisor. This review should be organized by the supervisor and the individual, although it is suggested that the review contains both a self-evaluation (by the individual) and a performance evaluation (by the supervisor). The supervisor must submit the review documents to the Chair of the Fischell Department of Bioengineering. It is noted that the individual has the right to appeal any annual review by submitting a formal letter to the Chair and further to the Faculty Ombuds Officer.

V. Professional Track Faculty with Specialist Roles (Faculty Specialist, Senior Faculty Specialist, Principal Faculty Specialist)

A. Criteria for Appointment or Promotion to Professional Track Faculty with Specialist Roles (Faculty Specialist, Senior Faculty Specialist, Principal Faculty Specialist)

1. Criteria for Appointment to Faculty Specialist

Initial appointments at the Faculty Specialist level may be made at the discretion of the Chair and do not require voting by faculty or School-level review (Table 1). The appointee shall hold a minimum of a Bachelor’s degree and 2 years of professional experience in a related area. A Master’s degree can be substituted for the 2 years of the professional experience. Candidates must show potential for excellence in the administration and/or management of academic or research programs as demonstrated to the Chair through written justification from their faculty advisor/supervisor. Faculty Specialists are expected to engage in activities such as developing curriculum and/or innovative means for delivering curriculum, supervising the non-research activities of graduate or post-doctoral students, serving as grant writers or authors of other publications for an academic or research program, conducting specialized research duties or other such duties that would generate intellectual property to which the faculty member shall retain the rights. Appointments to this rank are typically one (1) to three (3) years and are renewable.

2. Criteria for Appointment or Promotion to Senior Faculty Specialist

Candidates must have a superior record of administering and/or managing an academic or research program as demonstrated to the Chair through written justification from their faculty advisor/supervisor. Appointments to this rank are typically one (1) to five (5) years and are renewable. Candidates shall have a minimum of a Master’s degree and 2 years of professional experience in a related area or have at least 3 years full-time as a Faculty Specialist or equivalent. A Ph.D. degree can be substituted for the 2 years of professional experience.

3. Criteria for Appointment or Promotion to Principal Faculty Specialist

Candidates must have a proven record of excellence in administering and/or managing an academic or research program, as demonstrated to the Chair through written justification from their faculty advisor/supervisor. The appointee shall either (a) hold a Ph.D. and 4 years of professional experience in a related area or (b) have at least 5 years
of full-time experience as a Senior Faculty Specialist or its equivalent. Appointments are typically made as five (5) year contracts. Appointments for additional five (5) year terms can be renewed as early as the third year of any given five (5) year contract.

4. Additional Factors to be Considered (All Faculty Specialist Ranks)

The factors to be considered in appointment or promotion decisions depend on the candidate’s professional track. Performance will be evaluated on the primary job responsibilities as stated in the individual’s offer letter, appointment agreement and/or job description. Other factors that will be considered include:

a. Potential to make significant contributions to the profession.
b. Potential to work collaboratively with professional colleagues.
c. Potential for recognition as a leader in the profession.
d. Potential to contribute to the achievement of the goals of the School.
e. Interest in serving on Departmental, School, or University committees.
f. Creative abilities.

B. Criteria for Evaluation of Professional Track Faculty with Specialist Roles (Faculty Specialist, Senior Faculty Specialist, Principal Faculty Specialist)

1. Professional Track Faculty with Specialist Roles will be evaluated annually solely by their immediate supervisor. This review should be organized by the supervisor and the individual, although it is suggested that the review contains both a self-evaluation (by the individual) and a performance evaluation (by the supervisor). The supervisor must submit the review documents to the Chair of the Fischell Department of Bioengineering. It is noted that the individual has the right to appeal any annual review by submitting a formal letter to the Chair and further to the Faculty Ombuds Officer.

C. Procedural Guidelines for Appointment or Promotion to Senior Faculty Specialist or Principal Faculty Specialist

1. Any candidate who meets the eligibility requirements for promotion may request to be considered. Requests for promotion must be made to the Chair no later than June 1st of each year. New appointees at the Senior or Principal Faculty Specialist rank must be nominated for appointment by an existing tenured or professional-track faculty member in the Department - typically the individual to whom the appointee would directly report. In such cases, the nominating letter must accompany the candidate’s dossier.

2. The promotion dossier must be submitted to the Chair’s Office. It must include the following materials provided by the candidate (Table 2):
   a. Curriculum vita.
   b. Professional statement.
   c. Nomination letter (for new appointees only).
   d. Names and contact information for at least two (2) references. Suggested references could include constituents served, internal or external professional colleagues, the individual’s supervisor or principal investigator, and, if relevant, employees who report directly to the candidate.

3. While the candidate may confirm availability and willingness of potential references prior to applying for promotion, in order to solicit unbiased and confidential assessments, the request for letters must be issued by the Department (not the candidate), and should describe the criteria for the promotion and appointment, and must contain, at minimum, the candidate’s CV and professional statement. The final dossier must include at least two (2) letters. The letters are to be included in the candidate’s dossier for all future voting and consideration (Table 2).

4. The Department APT Committee (See Article IV) must hold a faculty vote on the promotion; the committee will include specialist-track professional faculty at or above
the promotion rank as well as tenured or tenure-track faculty (Table 1). Under the
condition that there are no PTK faculty in the unit at the promoting rank or above, the
candidate may, at their discretion, recommend to the committee chair a non-
Departmental PTK faculty member to serve on the Department APT Committee. This
person will have voting rights equivalent to eligible Departmental faculty. The voting
procedure will be as follows: 1) after the presentation of a report on the candidate’s
merits by the APT Subcommittee Chair, the committee will discuss the candidate’s case
until all the faculty present express their opinion/ concern on the candidate; 2) the
formal and final vote will be conducted via secret written ballot or electronic ballot; 3)
absentee ballots received by the Subcommittee Chair prior to the meeting shall be
included in the results of the formal vote. If multiple candidates are to be considered in
a single meeting, then each candidate shall be considered completely and voted upon
individually; the candidates shall be ordered by rank. A passing vote for the
promotion/appointment of the candidate requires a simple majority of the total votes.
In order to constitute a quorum of the Departmental APT Committee meetings, at least
two-thirds (2/3) of the Departmental APT Committee members must be in attendance.

5. Upon completion of the Department-level vote, the following must be added to the
dossier (Table 2):
   a. Concise summary of the vote.
   b. Letter from the Department Chair.
   c. Description of duties as specified in the contract.

6. For appointments and promotions to Senior Faculty Specialist ranks, the final dossier
   and Department recommendation are forwarded to the School for final approval by the
   Dean or designee.

7. For appointments and promotions to Principal Faculty Specialist, the final dossier and
   Department recommendation are forwarded for consideration by the School APPTK
   committee.

VI. Appointment or Promotion of Professional Track Faculty with Instructional Roles
   (Lecturer, Senior Lecturer, Principal Lecturer)
   A. Criteria for the Appointments Professional Track Faculty with Instructional Roles
      (Lecturer, Senior Lecturer, Principal Lecturer)
      1. Criteria for Appointment to Lecturer.
         Initial appointments at the Lecturer level may be made at the discretion of the Chair and
do not require voting by faculty or School-level review (Table 1). The title Lecturer will
ordinarily be used to designate appointments of persons who are serving in a teaching
capacity for a limited time or part-time, and not a long-term/permanent title.
Appointments to this rank are typically one (1) to three (3) years and are renewable.

2. Criteria for Appointment or Promotion to Senior Lecturer.
   Senior Lecturer appointees should have an exemplary teaching record over the course
of at least five (5) years of full-time instruction or its equivalent as a Lecturer (or similar
appointment at another institution) and shall exhibit promise in developing additional
skills in the areas of service, mentoring, or program development. Significant and
extended professional experience may be substituted for instructional experience,
provided it is essential to the instruction envisioned for the appointee. Appointments to
the rank of Senior Lecturer are typically one (1) to five (5) years and are renewable.
The Department specifically recognizes and encourages teaching excellence as
evidenced by student evaluations, student and alumni feedback, peer evaluations, the
adoption of innovative classroom practices, incorporation of modern instructional tools
/software, technology, videography, demonstrations), curriculum development,
effective training and supervision of teaching assistants, advising or mentoring of student organizations, outreach activities, and service to campus and professional communities.

3. **Criteria for Appointment or Promotion to Principal Lecturer**

   In addition to the qualifications required of the Senior Lecturer, appointees to this rank shall have an exemplary teaching record over the course of at least five (5) years full-time service or its equivalent as a Senior Lecturer (or similar appointment at another institution) or the equivalent of 5 years full-time course-relevant professional experience as well as demonstrated excellence in the areas of service, mentoring, or program development. Appointments are typically made as five (5) year contracts. Appointments for additional five (5) year terms can be renewed as early as the third year of any given five (5) year contract. Principal Lecturers, by virtue of their sustained record of exemplary teaching, are expected to play a role in advising, guiding, directing, supporting, or mentoring the instructional activities of others, including newly appointed Lecturers in the Department.

**B. Criteria for Evaluation of Professional Track Faculty with Instructional Roles (Lecturer, Senior Lecturer, Principal Lecturer)**

1. Professional Track Faculty with Instructional Roles (Lecturer, Senior Lecturer, Principal Lecturer) will be evaluated annually by a PTK Annual Review Committee. The PTK Annual Review Committee will be organized by the Department's Faculty Affairs Committee. The PTK Annual Review Committee will be composed of both TTK faculty and PTK faculty. There should be ad hoc representatives from Research and/or Lecturer PTK tracks on the committee. If no Research and/or Lecturer PTK member is available within the Department, the Chair may choose to invite PTK faculty from another engineering Department to represent those tracks. Reviews of Faculty with Instructional Roles will be conducted by PTK members in equivalent roles and all TTK Faculty serving on the committee.

2. Each Professional Track Faculty with Instructional Roles (Lecturer, Senior Lecturer, Principal Lecturer) member will prepare a (1) full CV, (2) Factual Summary and Self Evaluation Form including Impact Statement (optional) for submission to the PTK Annual Review Committee. Note that the documentation requested may modestly vary from year-to-year, according to the preference of the Faculty Affairs Committee. The information submitted should emphasize teaching, advising/mentoring, service, program-development, and, when appropriate, scholarship (research publications, presentations, and funding).

3. The PTK Annual Review Committee will review each case and provide an assessment of each case to the Department Chair. The Chair will then provide this assessment, along with any additional review materials assembled by the Chair, to the individual. It is noted that the individual has the right to appeal any annual review by submitting a formal letter to the Chair and further to the Faculty Ombuds Officer.

**C. Procedural Guidelines for Appointment or Promotion to Senior Lecturer and Principal Lecturer**

1. Any existing Lecturer or Senior Lecturer who meets the eligibility criteria may request to be considered for promotion to the next rank. Requests for promotion must be made to the Chair no later than June 1st of each year.

2. The promotion dossier should be submitted to the Chair’s Office. It must include the following materials provided by the candidate (Table 2):
   a. Curriculum vita.
   b. Professional statement.
   c. Nomination letter (for new appointees only).
d. Teaching Portfolio, including a summary of instructional activities, course enrollments, and student evaluations.

3. In addition to the candidate-provided items for promotions of candidates who are presently appointed in the School, the Department must organize and conduct at least one (1) peer evaluation in which another (professional, tenured, or tenure-track) faculty member observes the candidate in an instructional setting and provides a concise evaluative summary to be included in the candidate’s dossier (Table 2).

4. The Department APT Committee (See Article IV) must hold a faculty vote on the promotion; the committee will include lecturer-track professional faculty at or above the promotion rank as well as tenured or tenure-track faculty (Table 1). Under the condition that there are no PTK faculty in the unit at the promoting rank or above, the candidate may, at their discretion, recommend to the committee chair a non-Departmental PTK faculty member to serve on the Department APT Committee. This person will have voting rights equivalent to eligible Departmental faculty. The voting procedure will be as follows: 1) after the presentation of a report on the candidate’s merits by the APT Subcommittee Chair, the committee will discuss the candidate’s case until all the faculty present express their opinion/concern on the candidate; 2) the formal and final vote will be conducted via secret written ballot or electronic ballot; 3) absentee ballots received by the Subcommittee Chair prior to the meeting shall be included in the results of the formal vote. If multiple candidates are to be considered in a single meeting, then each candidate shall be considered completely and voted upon individually; the candidates shall be ordered by rank. A passing vote for the promotion/appointment of the candidate requires a simple majority of the total votes. In order to constitute a quorum of the Departmental APT Committee meetings, at least two-thirds (2/3) of the Departmental APT Committee members must be in attendance.

5. Upon completion of the Department-level vote, the following must be added to the dossier (Table 2):
   a. Concise summary of the vote.
   b. Letter from the Department Chair.
   c. Description of duties as specified in the contract.

6. For appointments and promotions to Senior Lecturer, the final dossier and Department recommendation are forwarded to the School for a final decision by the Dean or designee.

7. For appointments and promotions to Principal Lecturer, the final dossier and Department recommendation are forwarded for consideration by the School APPTK committee.

VII. Professional Track Faculty with Research Roles (Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, and Research Engineer)

A. Criteria for the Appointment of Professional Track Faculty with Research Roles (Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, and Research Engineer)

1. Criteria for Appointment to the Ranks of Assistant Research Professor, Assistant Research Scientist, and Assistant Research Engineer

   Initial appointments at the Assistant Research level may be made at the discretion of the Chair and do not require voting by faculty or School-level review (Table 1). These ranks are generally parallel to Assistant Professor and are to be considered equivalent for the
purpose of seniority, privilege, committee representation, service expectation, and voting eligibility. Appointees should be qualified and competent to direct the work of others (such as technicians, graduate students, other research personnel). An earned doctoral degree will be a normal minimum requirement for appointment at these ranks. Appointments to these ranks are typically one (1) to three (3) years and are renewable.

a. Appointees to the rank of Assistant Research Professor shall have demonstrated superior research ability and potential for contributing to the educational mission through teaching or service.
b. Appointees to the rank of Assistant Research Scientist shall have demonstrated superior scientific research ability.
c. Appointees to the rank of Assistant Research Engineer shall have a demonstrated record of superior engineering practice, design, and development.

2. Criteria for Appointment to the Ranks of Associate Research Professor, Associate Research Scientist, and Associate Research Engineer

These ranks are generally parallel to Associate Professor and are to be considered equivalent for the purpose of seniority, privilege, committee representation, service expectation, and voting eligibility. Appointees must demonstrate all of the qualifications required of the corresponding assistant research position, plus the qualifications articulated below. Appointments to these ranks are typically one (1) to five (5) years and are renewable.

a. Associate Research Professor appointees shall have extensive successful experience in scholarly or creative endeavors, the ability to propose, develop, and manage major research projects, and proven contributions to the educational mission through teaching or service.
b. Associate Research Scientist appointees shall have significant scientific research accomplishments, show promise of continued productivity, and have the ability to propose, develop, and manage research projects.
c. Associate Research Engineer appointees shall have a record of significant engineering achievement, show promise of continued productivity, and have the ability to propose, develop, and manage engineering projects.

3. Criteria for Appointment to the Ranks of Research Professor, Research Scientist, and Research Engineer

These ranks are generally parallel to Professor and are to be considered equivalent for the purpose of seniority, privilege, committee representation, service expectation, and voting eligibility. Appointees must demonstrate all of the qualifications required of the corresponding associate research position, plus the qualifications articulated below. Appointments are typically made as five (5) year contracts. Appointments for additional five (5) year terms can be renewed as early as the third year of any given five (5) year contract.

a. Research Professor appointees shall have established a national and, where appropriate, international reputation for outstanding research. Appointees should have a record of outstanding scholarly production in research, publications, professional achievements or other distinguished and creative activity, and exhibit excellence in contributing to the educational mission through teaching or service.
b. Research Scientist appointees shall have established a national and, where appropriate, international reputation for outstanding scientific research. Appointees should provide tangible evidence of sound scholarly production in research, publications, professional achievements, or other distinguished and creative activity.
c. Research Engineer appointees shall have established a national and, where appropriate, international reputation for outstanding engineering practice, design, and development. Appointees should provide tangible evidence of sound scholarly production in research, publications, professional achievements, or other distinguished and creative activity.

4. Additional Factors to be Considered (all Research Faculty Ranks)

The factors to be considered in appointment and promotion decisions depend on the candidate’s professional track, and the expected level of accomplishment generally increases with rank within the research faculty sequence. Whenever appropriate and available, these items should be documented in the candidate’s CV, professional statement, or other supporting materials.

a. Advising and Mentoring of Students, Trainees, and Postdoctoral Researchers (all Research tracks).

Factors to be considered include: Supervision or co-advising of graduate students, completion of M.S. theses and Ph.D. dissertations by advisees, career placement of former students, participation on thesis committees, mentoring of postdoctoral researchers, advising of undergraduate students, and all other research or technical supervision. Significant awards and recognitions of research advisees should be noted.

b. Teaching and Instruction (Research Professor only).

Factors to be considered include: record of teaching, enrollments, student evaluations, curriculum revision, course modernization, new course development, tutorials and short-courses for conferences, professional societies or local industry, advising student teams, training users on experimental equipment, and other instructional roles.

c. Research and Scholarship (all Research tracks).

Scholarly works (peer-reviewed journal articles, refereed conference proceedings, patents, books) and non-traditional scholarly works could include software, standards, procedures, technical reports, and design studies. The quality and selectivity of the publication outlets should be explained.

d. Presentations and Invited Talks (all Research tracks).

e. Awards, Fellowships, and Recognitions (all Research tracks).

f. Grants and Contracts (all Research tracks).

A sustained record of sponsored research appropriate to the candidate’s rank and specialization.

g. Service (as appropriate given an individual’s appointment agreement).

Department, School, and University service, membership, and service to relevant professional societies, service to the federal, state, and local governments, interaction with industry and external research organizations, service on editorial boards of archival journals and major conference program committees, and community outreach.

h. If the appointee has specific research responsibilities in addition to those mentioned above (and consistent with the title and rank, as per II.B), they should be described in the individual’s appointment agreement. Any addition to the criteria outlined here should be evaluated based upon these responsibilities.

B. Criteria for Evaluation of Professional Track Faculty with Research Roles (Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, and Research Engineer)
1. Professional Track Faculty with Research Roles (Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, and Research Engineer) will be evaluated annually by a PTK Annual Review Committee. The PTK Annual Review Committee will be organized by the Department’s Faculty Affairs Committee. The PTK Annual Review Committee will be composed of both TTK faculty and PTK faculty. There should be representatives from Research and/or Lecturer PTK tracks on the committee. If no Research and/or Lecturer PTK member is available within the Department, the Chair may choose to invite PTK faculty from another engineering Department to represent those tracks. Reviews for Faculty with Research Roles will be conducted by members of the subcommittee in equivalent roles and by all TTK faculty serving on the committee.

2. Each Professional Track Faculty with a Research Role (Assistant Research Professor, Assistant Research Scientist, Assistant Research Engineer, Associate Research Professor, Associate Research Scientist, Associate Research Engineer, Research Professor, Research Scientist, and Research Engineer) member will prepare a (1) full CV, (2) Factual Summary and Self Evaluation Form including Impact Statement (optional) for submission to the Annual Review Committee. Note that the documentation requested may modestly vary from year-to-year, according to the preference of the Faculty Affairs Committee. The information submitted should emphasize scholarship (research publications, presentations, and funding), and include when appropriate service, advising, mentoring, teaching.

3. The PTK Annual Review Committee will review each case and provide an assessment of each case to the Department Chair. The Chair will then provide this assessment, along with any additional review materials assembled by the Chair, to the individual. It is noted that the individual has the right to appeal any annual review by submitting a formal letter to the Chair and further to the Faculty Ombuds Officer.

C. Procedural Guidelines for Appointment or Promotion to Associate Research (Professor/Scientist/Engineer) and Research (Professor/Scientist/Engineer)

1. Any existing professional track research faculty member who meets the eligibility criteria may request to be considered for promotion to the next rank. Requests for promotion must be made to the Chair no later than June 1st of each year.

2. The promotion dossier should be submitted to the Chair’s Office. It must include the following materials provided by the candidate (Table 2):
   a. Curriculum vita.
   b. Professional statement.
   c. Nomination letter (for new appointees only).

3. The Department must request external letters of reference for the candidate (Table 2). The request for letters must describe the criteria for the promotion and appointment, and must contain, at minimum, the candidate’s CV and Professional Statement. The final dossier must include at least 4 letters for Associate Research faculty ranks, and 5 letters for the highest Research Faculty ranks. For newly appointed research faculty, the nominating letter from a present tenured- or tenure-track faculty may be substituted for a solicited letter. The letters are to be included in the candidate’s dossier for all future voting and consideration.

4. The APT Committee (See Article IV) must hold a faculty vote on the promotion; the committee will include research-track professional faculty at or above the promotion rank as well as tenured or tenure-track faculty (Table 1). Under the condition that there are no PTK faculty in the unit at the promoting rank or above, the candidate may, at their discretion, recommend to the committee chair a non-Departmental PTK faculty
member to serve on the Department APT Committee. This person will have voting
rights equivalent to eligible Departmental faculty. The voting procedure will be as
follows: 1) after the presentation of a report on the candidate’s merits by the APT
Subcommittee Chair, the committee will discuss the candidate’s case until all the faculty
present express their opinion/ concern on the candidate; 2) the formal and final vote
will be conducted via secret written ballot or electronic ballot; 3) absentee ballots
received by the Subcommittee Chair prior to the meeting shall be included in the results
of the formal vote. If multiple candidates are to be considered in a single meeting, then
each candidate shall be considered completely and voted upon individually; the
candidates shall be ordered by rank. A passing vote for the promotion/appointment of
the candidate requires a simple majority of the total votes. In order to constitute a
quorum of the Departmental APT Committee meetings, at least two-thirds (2/3) of the
Departmental APT Committee members must be in attendance.

5. Upon completion of the Department-level vote, the following must be added to the
dossier (Table 2):
   a. Concise summary of the vote.
   b. Letter from the Department Chair.
   c. Description of duties as specified in the contract.

6. For appointments and promotions to Associate Research Faculty ranks, the final dossier
   and Department recommendation is forwarded to the School for a final decision by the
   Dean or designee.

7. For appointments and promotions to Research (Professor/Scientist/Engineer), the final
dossier and Department recommendation are forwarded for consideration by the
School APPTK committee.
Table 1: Detailed Listing of Department APT Committee Membership and Voting Eligibility for Each PTK Position.

<table>
<thead>
<tr>
<th>Candidate Type and Level</th>
<th>Appointment To:</th>
<th>Department APT Committee Membership &amp; Voting Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Assistant</td>
<td>Faculty Assistant</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td>Post-Doctoral Associate</td>
<td>Post-Doctoral Associate</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td>Faculty Specialist</td>
<td>Faculty Specialist</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td></td>
<td>Senior Faculty Specialist*</td>
<td>Senior Faculty Specialist, Principal Faculty Specialist, Assistant Professors, Associate Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Principal Faculty Specialist*</td>
<td>Principal Faculty Specialist, Assistant Professors, Associate Professors, Full Professors</td>
</tr>
<tr>
<td>Lecturer</td>
<td>Lecturer</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td></td>
<td>Senior Lecturer*</td>
<td>Senior Lecturers, Principal Lecturers, Associate Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Principal Lecturer*</td>
<td>Principal Lecturers, Full Professors</td>
</tr>
<tr>
<td>Research Professor, Scientist, Engineer</td>
<td>Assistant Research Professor*</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td></td>
<td>Assistant Research Scientist*</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td></td>
<td>Assistant Research Engineer*</td>
<td>Appointed by Chair</td>
</tr>
<tr>
<td></td>
<td>Associate Research Professor*</td>
<td>Associate Research Professors, Research Professors, Associate Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Associate Research Scientist*</td>
<td>Associate Research Scientists, Research Scientists, Associate Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Associate Research Engineer*</td>
<td>Associate Research Engineers, Research Engineers, Associate Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Research Professor*</td>
<td>Research Professors, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Research Scientist*</td>
<td>Research Scientists, Full Professors</td>
</tr>
<tr>
<td></td>
<td>Research Engineer*</td>
<td>Research Engineers, Full Professors</td>
</tr>
</tbody>
</table>

*Under the condition that there are no PTK faculty in the unit at the promoting rank or above, the candidate may, at their discretion, recommend to the committee chair a non-Departmental PTK faculty member to serve on the Department APT Committee. This person will have voting rights equivalent to eligible Departmental faculty on the Departmental APT Committee.
Table 2: Detailed Listing of Required Documentation for Each PTK Position.

| Title                      | Rank          | Appointment / Promotion | Nomination Letter | CV            | Professional Statement | Teaching Portfolio | Summary of Instructional Activities | Course Enrollments | Student Evaluations | Peer Evaluation of Duties | Description of Duties | Sample Request for Letters | External Letters | Result of Unit / Department Vote | Date | Vote Counts | Rank of Voters | Vote Explanation (if Needed) | Letter From Unit Head / Department Chair | School Review (Dean Office / School APPTK) |
|----------------------------|---------------|--------------------------|-------------------|---------------|------------------------|--------------------|-------------------------------------|-------------------|---------------------|---------------------------|------------------------|-------------------------------|----------------|--------------------------|-------|-------------|-----------------------------|------------------------------------------|------------------------------------------|
| Faculty Specialist         | Specialist    | A                        | x                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | x                             | ✓             | x                        | x     | x           | x                          | x                                         | x                                         |
|                            | Senior        | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | x                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | DO                                        |
|                            | Principal     | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | x                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Senior        | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | DO                                        |
|                            | Principal     | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
| Lecturer                   | Specialist    | A                        | x                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Senior        | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Principal     | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Senior        | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | DO                                        |
|                            | Principal     | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
| Research Professor, Scientist, Engineer | Assistant | A                        | x                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Associate     | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Full          | A                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Associate     | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |
|                            | Full          | P                        | ✓                 | ✓             | ✓                      | ✓                  | ✓                                   | ✓                 | ✓                   | ✓                         | ✓                      | ✓                             | ✓             | ✓                        | ✓     | ✓           | ✓                          | ✓                                         | SAPPTK                                    |

- candidate signature & date required

- New appointees must be nominated by an existing TTK faculty member in the unit, usually the supervisor or PI.
- Summary of candidate’s duties, not rank qualifications.
- Applies only if letters are requested.
- Voting eligibility and committee vary by title - see Table 1.
- Nominations can also come from PTK unit members.
- The nominating letter may be substituted for one solicited letter.
- From internal or external professional colleagues, supervisor or PI, employees, or constituents.
- DO: Dean's Office, SAPPTK: School Appointment and Promotion for PTK Faculty Committee.
APPENDIX D
MERIT PAY DISTRIBUTION PLAN

I. Introduction
The UMCP Organizational Plan requires that each Department develop a merit plan and a Department Merit Pay Committee (MPC). The MPC will evaluate and rank all tenured and tenure-track Faculty in order to advise to the Department Chair. The assessment will reflect quality and quantity of performance in the areas of teaching, research, service, and impact. Performance in the areas of teaching and research are weighed equally and each more heavily than service or impact. It is noted that part of the educational mission is graduate student training, and this is evaluated as part of teaching.

II. Composition of the Department Merit Pay Committee
A. The MPC shall be composed of five faculty members, at least one from each rank. Insofar as possible, the MPC’s composition shall also reflect the gender and racial distribution and the various scholarly interests of the department. It is recognized that this distribution may not be achievable on a year by year basis, but over a period of years, a reasonable degree of representativeness should be achieved.
B. The members of the MPC shall be elected by the entire faculty and will serve a one year term, with the exception of one member, selected by the MPC, who will serve a second year as Chair of the committee. Each year the Department Chair shall review the makeup of the MPC over the previous five years to assure appropriate representation has been achieved and if it has not, the Chair is to take appropriate action with faculty approval via subsequent voting, to rectify the situation.
C. The MPC will typically be constituted by the Departmental Faculty Affairs Committee.

III. Responsibilities of MPC
A. The MPC will evaluate the performance during the current year of each faculty member in the areas of teaching, research, and service.
B. For each faculty member, the MPC will determine a performance rating explicit in each category as identified in a Summary of Faculty Performance Form.
C. The performance rating for each faculty member will be given to the Department Chair.

IV. The Evaluation Process
A. The MPC will be provided by the Department Chair with the faculty review forms from the current year as well as the teaching evaluation scores for the two most recent semesters for which they are available. The Chair will also provide a complete CV for each faculty member. The evaluation should reflect performance over at least the immediate past three years. For years when merit pay is not available, the achievements of the faculty members will be taken into consideration in which merit pay is available for that year (or years) during the next year in which merit pay is available. Faculty members may append the faculty review forms with additional documentation of performance.
B. Each faculty member shall be evaluated independently by each of the five members of the MPC in each of the four areas of teaching, research, service, and impact
C. In each of the four areas, the relevant activities will be evaluated.
D. The MPC chair completes the Summary form based on the committee outcomes.

V. Role of the Department Chair
A. The Chair shall assign the merit pool based on the following: (i) the performance rating for the current year, (ii) additional factors not counted by the MPC (additional factors may include leadership in new initiatives, honors and awards, departmental citizenship, new research areas developed, new facilities developed, special projects for the Department), and (iii) a portion of the merit pool may be reserved to address inequities as they may arise. The responsibility for correcting inequities is left to the Department Chair.

B. Following the assignment of merit increments, the Chair shall provide feedback to the MPC describing how the merit increments were determined.

C. Each faculty member shall be informed in writing by the Chair of the ratings provided by the MPC and amount of his/her merit raise. This letter will indicate that the MPC and Chair have followed the Plan or indicate areas where they have deviated from the plan. Faculty members have the right to appeal the merit pay decision via a formal letter to the Chair.

D. The Chair shall annually evaluate the salary structure of the department and consult with the appropriate administrators (Dean or the Provost) to address salary compression or salary inequities that have developed in the unit.

VI. Relevant Activities in Each Area

A. Teaching Activities
   1. Classroom instruction: Evaluation should take into account student evaluations, normalized according to level. The number of classes and load required for each course should be considered.
   2. Educational development: Development of new courses, significant revisions, publication of textbooks.
   3. Undergraduate advising, non-research graduate student advising, and student recruitment.
   4. Advising of undergraduates and graduates on research.

B. Research Activities
   1. Publication and presentation of research results.
   2. Grants and contracts: Competitiveness of the award process and extent of peer review and importance.
   3. Completion of M.S. and Ph.D. theses by research advises.
   4. Graduate student research advisement and participation on thesis committees.

C. Service
   1. Department service.
   2. School service.
   3. Campus service.
   4. Community and professional service.