Description of PTK Titles and Ranks for Appointments and Promotions in Engineering

Summarized by the Associate Dean for Faculty Affairs, 11-17-2018

Acronym Definitions
PTK = professional track
TTK = tenured / tenure track
AEP = appointment, evaluation, & promotion (used by campus)
APPTK = appointment and promotion for PTK faculty (used by engineering, equivalent to AEP)
Research XX = Research Professor/Scientist/Engineer; may be preceded by "Assistant" or "Associate"
Research faculty = Research Professor/Scientist/Engineer at any rank

I Purpose of This Document

PTK faculty play an essential role in the overall mission of the School. PTK faculty appointed by the College follow the ranks outlined in the University of Maryland Policy and Procedures for Appointment, Promotion, and Tenure of Faculty II-1.00(A), and procedures regarding PTK faculty follow the UM Guidelines for Appointment, Evaluation, and Promotion of Professional Track Faculty (5/4/2015) (together, "Campus Policy) and the A. James Clark School of Engineering Policy on Appointment and Promotion of Professional Track Faculty ("ENG APPTK Policy"). Campus and ENG policies take precedence if there are conflicts with this document. Units are required to develop unit-level policies, which may have additional requirements.

The ENG APPTK Policy established policies and set expectations and some common standards for the College. The roles of faculty in the various PTK title tracks vary widely, and roles even within the same title and rank vary among individual faculty. This document further clarifies the tracks and ranks[1]. It aims to be helpful to both PTK faculty members and evaluators. The Associate Dean for Faculty Affairs can be contacted before new appointments are made to discuss appropriate title and rank.

While the ENG APPTK Policy sets *minimal* expectations and required documentation, those are not necessarily sufficient for a strong package that makes a good case for appointment or promotion. This document also provides some guidance for preparing strong cases. *If upon reviewing a candidate's promotion package materials, the Dean has questions or concerns, the Dean may ask the promotion committee chair for clarification and/or additional information to be submitted.* For the highest-level promotions, this also holds true for the APPTK and AEP committees.

There will be a transition period as new PTK unit policies are put into effect. Units should strive to ensure that faculty hired prior to the existence of clear promotion pathways are not disadvantaged. This may require re-setting expectations, moving faculty into more appropriate title tracks, and reviewing faculty for overdue promotions.

[1] The UM guidelines (III.C) say about unit policies, "Policies and procedures should address how PTK faculty who are active in only one or two dimensions of the three dimensions evaluated for promotion, e.g., teaching, research and service, will be evaluated upon application for promotion."; (III.E) "Qualifications required for appointment and promotion shall be explicitly stated.". Regarding contracts (IV.B), "Given that PTK faculty might be active in only one or two of the three dimensions of academic activity, assignments and expectations shall establish explicitly the scope of the appointee's efforts in terms of the three dimensions of academic activity, i.e., Teaching, Research, and Service, thereby providing expectations for evaluating faculty performance and applications for promotion."

II Links to Policies

The relevant policies governing PTK faculty are summarized in Table 1; also included are links to various other relevant or useful documents.

Table 1: Policies, Guidelines, Forms, and Templates

Level	Information	Policy
Campus	PTK title creation	https://drupal-base-s3-drupalshareds3-1qwpjwcnqwwsr.s3.amazonaws.com/president/s3fs-public/II-100G.pdf
	PTK title descriptions	https://faculty.umd.edu/policies/ntt_titles.html
	PTK titles, old vs new	https://www.faculty.umd.edu/appointment/new-titles.html
Campus	**AEP policy**	https://president.umd.edu/sites/president.umd.edu/files/documents/policies/II-100A.pdf
	AEP guidelines	www.faculty.umd.edu/policies/documents/UM_Guidelines_for_PTK_Appointments.pdf
	AEP guidelines, senate report	www.senate.umd.edu/sites/default/files/resources/billDocuments/14-15-09/stage5/Presidential_Approval_14-15-09.pdf
	policy, PTK instructional > 50%	https://drupal-base-s3-drupalshareds3-1qwpjwcnqwwsr.s3.amazonaws.com/president/s3fs-public/II-100F.pdf
	policy, full time instructional	http://www.usmd.edu/regents/bylaws/SectionII/II105.html
	policy, part time instructional	http://www.usmd.edu/regents/bylaws/SectionII/II106.pdf
Campus	CV template	https://faculty.umd.edu/policies/documents/CVTemplate.docx
	dossier preparation	https://pdc-svpaap1.umd.edu/policies/documents/APTManual.pdf starting page 39
	transmittal form	https://faculty.umd.edu/policies/documents/Transmittal2015.pdf
	teaching eval. template	https://faculty.umd.edu/policies/documents/TeachingEvaluationTemplate.xlsx
	teaching portfolio	https://tltc.umd.edu/portfolios
Campus	faculty handbook	https://faculty.umd.edu/policies/ptkfaculty.html
Campus	postdoc description	https://gradschool.umd.edu/faculty-and-staff/postdoctoral-scholars/postdoctoral-appointments/postdoctoral-associates
	postdoc manual	https://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/postdoc_manual.docx
College	**policy, APPTK**	https://clarknet.eng.umd.edu/sites/default/files/documents/PTK_Appointment_Promotion_ENGR_Policy.pdf

III Overview of PTK Tracks

PTK faculty may have duties that are primarily instructional, primarily research, primarily service/administrative, or a combination of instructional, research, technical service, and administrative (see Appendix A for a graphic), and faculty should be hired into the appropriate title track (see II.D in ENG APPTK), meaning a track in which excellent performance of those duties will allow the faculty member to be promoted. General descriptions of the title tracks are given in Table 2. *In all cases PTK faculty carry out the scholarly/academic mission of the university, and for promotion the nature of that contribution must be clearly identified in the promotion package, with excellence demonstrated by specific evidence of achievement and impact.*

Because Faculty Assistant and Post-Doctoral Associate are time-limited, non-promotable titles (Figure 1), they are not addressed here. However, unit plans must address the distinctions between the duties and expectations for these two titles and those included here.

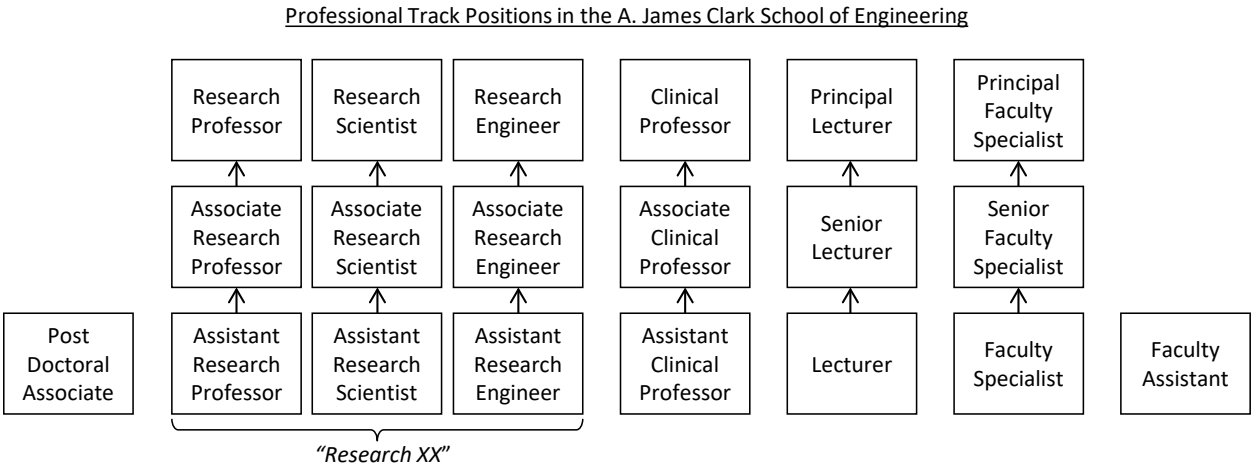


Figure 1. Professional track titles in use in the A. James Clark School of Engineering, showing the various titles and promotion pathways between ranks in each track.

Table 2. Promotable PTK title tracks, overview descriptions. Details for each follow in subsequent sections.

Research XX			**Faculty Specialist**	**Educational Roles**	
Expected to obtain funding to support the research.					
Research Professor	**Research Scientist**	**Research Engineer**		**Lecturer**	**Clinical Professor**
Primarily involved in research but also involved with education, often outside the classroom. Research part of promotion package resembles that of TTK faculty in publications, fund-raising, etc., albeit at a somewhat reduced scale.	Primarily involved in research with a focus on creating knowledge. Research part of promotion package resembles that of TTK faculty in publications, fund-raising, etc., albeit at a somewhat reduced scale.	Primarily involved in research with a focus on creating new things. Expected to disseminate knowledge gained, which may be primarily in forms other than journal papers (e.g. patents, reports, software, etc.).	These are technicians, in the broadest possible sense. Duties vary widely but primarily focus on technical work and/or technical service. No expectation to publish; if knowledge is gained from these activities it is typically disseminated in ways other than journal publications.	Primarily classroom teaching but may also have other duties, such as advising, curriculum development, or lab management, and may include some duties unrelated to teaching.	These titles are used for those with extensive private sector or government experience. The role primarily involves a combination of administration and teaching although it can include a scholarship component.

Promotion will be recognized by a title change and compensation increment beginning the following fiscal year and continuing each year thereafter. No PTK ranks carry tenure. Each academic year there will be a single regular review cycle at the College level, which occurs starting February 1 and ending March 1. (New appointments will be reviewed as required.)

It is recommended that the candidate consult with his or her mentor, program director, supervisor, or PI before applying for promotion, although their consent is not required.

Appointments

Competitive, posted searches are strongly encouraged for PTK faculty with >= 50% FTE. Minimal criteria for appointment and promotion are given in the ENG APPTK Policy.

Contracts

The appointment contract stipulates the specific duties and the % FTE dedicated to each of the domains (teaching, research, administration). Appointment/promotion review will be based on the duties outlined in the contract, proportional to the % FTE in each.

For achievements by PTK faculty in domains that are not included in the appointment contract, evidence of such accomplishment is strongly encouraged to be submitted as part of the promotion package. However, such information will be considered supplementary evidence of accomplishment overall and not central to promotion.

Instructional Duties

If a faculty member's appointment includes instructional duties, as part of the promotion package the PTK faculty member should submit a teaching portfolio; if the duties include at least 25% instruction, the teaching portfolio is required in the promotion package. This is the *same* teaching portfolio as required of TTK faculty.

IV Lecturer Track

IV.A Campus and Engineering Promotion Language

For convenience to the reader, Campus and College language on minimum criteria is provided here.

Table 3: Minimum criteria for appointment and promotion of Lecturer faculty.

	Source	Lecturer	Senior Lecturer	Principal Lecturer
Role	campus	The title Lecturer is used to designate appointments of persons serving primarily in a teaching capacity.		
Academic Degree	campus	The normal minimum requirement is a Master's degree or equivalent professional experience in the field of instruction or a related field.		
Professional Experience	campus		In addition to having the qualifications of a Lecturer, the appointee shall have an exemplary teaching record over the course of at least five years of full-time professional experience or its equivalent as a Lecturer (or similar appointment at another institution) and shall exhibit promise in developing additional skills in the areas of research, service, mentoring, or program development.	In addition to the qualifications required of the Senior Lecturer, the appointee shall have an exemplary teaching record over the course of at least 5 years full-time service or its equivalent as a Senior Lecturer (or similar appointment at another institution) and/or the equivalent of 5 years full-time professional experience as well as demonstrated excellence in the areas of research, service, mentoring, or program development.
	ENG		Significant and extended professional experience may be substituted for instructional experience, provided it is essential to the instructional envisioned for the appointee.	
Contract Terms	campus	Appointments to this rank are typically one to three years and are renewable.	Appointments to this rank are typically one to five years and are renewable.	Appointments are typically made as five-year contracts. Appointments for additional five-year terms can be renewed as early as the third year of any given five-year contract.
	ENG	If the appointee has specific instructional responsibilities, roles or expectations among or in addition to those mentioned above (and consist with the title and rank, as per II.B), they should be described in the individual's appointment agreement. In addition to the criteria outlined here and in the Unit-level policy, appointees or candidates for promotion should be evaluated based upon these responsibilities.		
Other	ENG		The College 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.	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. This may include TTK faculty.

IV.B Role Differentiation Among Lecturer Track Ranks

IV.B.1 Lecturer

The role of lecturer varies, with some faculty engaged exclusively in teaching and others engaged in a combination of teaching and other duties, such as student advising or instructional laboratory management, or even some duties that are unrelated to teaching. Lecturers should be reliable, able to work collaboratively with colleagues, be good departmental/unit citizens, and show a willingness to make significant contributions to the educational mission of the department/unit.

IV.B.2 Senior Lecturer

The role of Senior Lecturer differs from that of Lecturer in the expectation that a Senior Lecturer will be involved with service and leadership, in the unit, across campus, and possibly professionally, which may include mentoring and training, initiating and overseeing professional development activities; serving on committees (including PTK promotion sub-committees); and/or pursuing scholarly work in pedagogy.

IV.B.3 Principal Lecturer

The role of Principal Lecturer differs from that of Senior Lecturer in the expectation that a Principal Lecturer will play a leadership role in education in the department/unit, including advising, guiding, directing, supporting, evaluating, and mentoring the instructional activities of others.

IV.C Promotion Philosophy

Promotion is based on outstanding performance, which means surpassing expectations in one or more important areas of assigned responsibilities as demonstrated by definitive indicators. Lecturer track faculty will be expected to have a multi-year teaching portfolio that demonstrates sustained commitment to excellence. It is not enough to simply teach adequately for five years.

As a general rule:

- For promotion or appointment to Senior Lecturer, the candidate must have demonstrated commitment to excellence and noteworthy teaching ability, which means recognition by students and peers as a stimulating and effective teacher, as well as engagement in some course development or curricular innovation.
- For promotion or appointment to Principal Lecturer, the candidate must additionally have demonstrated sustained service and leadership and be able to clearly demonstrate how the activities in which the candidate has been involved have improved student education. These accomplishments should have earned some degree of recognition outside the department/unit. Hires at this rank will be possible only in unusual cases.

IV.D Qualifications

Candidates shall document or demonstrate the following.

1. Time in Rank In accordance with University of Maryland policy, the equivalent of at least 5 years of full-time instruction at the current rank. Early promotions are possible if the candidate's qualifications meet the criteria[2]; the candidate needs to make a persuasive case.
   - At least 2 of the 5 years must have been performed in the department(s)/unit(s) in which the candidate is being promoted. The split between departments/units in the case of a joint appointment is not a factor, but the department/unit with the greater fraction will be the primary unit.
   - The number of years for part-time appointments will be calculated as 5years*100/%FTE. (For a 50% appointment, 500/50 = 10 years)
   - Years at another institution in an equivalent position will be counted as equivalent for eligibility, to a maximum of 3 years.
   - Department/unit APPTK plans should specify what kinds of "significant and extended professional experience" may be substituted for instructional experience (see Table 3, "Professional Experience")[3].

2. Teaching Record A sustained track record of exemplary teaching as made evident by student course evaluations, peer teaching observations, alumni feedback, teaching portfolio materials, awards, and the like.[4]

[2] By campus policy, expectations related to appropriate time in rank shall not preclude a faculty member from seeking to be reviewed early or from opting not to be reviewed.

[3] By campus policy, "For title series in which professional experience can substitute for a degree requirement, unit policies and procedures shall provide discipline-specific baseline standards for the types and levels of professional activities that will constitute equivalencies for degree requirements."

[4] The examples given here are based on current practice. In the future, other methods of evaluating teaching effectiveness may be adopted by the College; in that case these examples should be modified.

- Peer teaching evaluations should be positive overall, although constructive feedback may have been provided. Response to constructive feedback should be clearly evident
- Student teaching evaluations should consistently meet or exceed the average, or should demonstrate continued improvement. Typically the college average will be used, but for large or difficult courses, another context may be included if appropriate.
- As appropriate, there should be evidence of teaching effectiveness or improvements in areas such as classroom innovation, more successful methods of teaching, updating content or delivery, better methods of assessment, development or upgrading of laboratories, training and supervision of teaching assistants, and the like.
- The teaching portfolio materials should be of high quality and show evidence of academic rigor.
- The candidate should have engaged in professional skill development.

3. Other Duties Depending on the duties of the candidate and the level of the promotion, the candidate should provide evidence of engagement in leadership, advising, mentoring, service, program development, scholarship, and the like.

Because it is recognized that the roles of lecturers vary, the qualifications specified here will be applied in the context of the candidate's specific duties. Units may adopt additional evaluation criteria beyond those described here.

Examples of considerations that can be taken into account when evaluating excellence in education are given in section IX.A.

V Research XX Track

V.A Campus and Engineering Promotion Language

For convenience to the reader, Campus and College language on minimum criteria is provided here. These tracks and ranks are "*generally parallel*" with the tenure track.

Table 4: Minimum criteria for appointment and promotion of Research XX faculty.

	Source	Assistant	Associate	Full
Research XX	campus	Appointees should be qualified and competent to direct the work of others (such as technicians, graduate students, other research/engineering personnel).		
Research Professor	campus	Appointees shall have demonstrated superior research ability and potential for contributing to the educational mission through teaching and/or service.	In addition to the qualifications required of the Assistant 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 and/or service.	In addition to the qualifications required of the Associate Research Professor, appointees shall have demonstrated a degree of proficiency sufficient to establish an excellent reputation among regional and national colleagues. 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 and/or service.
Research Scientist	campus	Appointees shall have demonstrated superior scientific research ability.	In addition to having the qualifications required of the Assistant 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.	In addition to having the qualifications required of the Associate 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, and/or other distinguished and creative activity.
Research Engineer	campus	Appointees shall have a demonstrated record of superior engineering practice, design, and development.	In addition to having the qualifications required of the Assistant 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.	In addition to having the qualifications required of the Associate 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, and/or other distinguished and creative activities.
Academic Degree	campus	An earned doctoral degree will be a normal minimum requirement for appointment at this rank.		

	Source	Assistant	Associate	Full
Contract Terms	campus	Appointments to this rank are typically one to three years and are renewable.	Appointments to this rank are typically one to five years and are renewable.	Appointments are typically made as five-year contracts. Appointments for additional five-year terms can be renewed as early as the third year of any given five-year contract.
	ENG	If the appointee has specific research responsibilities in addition to those mentioned above (and consist with the title and rank, as per II.B), they should be described in the individual's appointment agreement. In addition to the criteria outlined here and in the Unit-level policy, appointees or candidates for promotion should be evaluated based upon these responsibilities.		
Other	ENG	Relevant teaching and advisement factors to be considered in evaluating the quality of teaching and advisement should include: 1. Supervision of graduate students, and completion of M.S. and Ph.D. theses by advisees, 2. Achievement and recognition of student-advised work, 3. Placement of advisees.		
Excellence	ENG	V.D. 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. 1. Advising and Mentoring of Students, Trainees and Postdoctoral Researchers 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. 2. Teaching and Instruction (for appointment that include instructional responsibilities) 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. 3. Research and Scholarship a) Scholarly works (peer-reviewed journal articles, refereed conference proceedings, patents, books) 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. b) Presentations and Invited Talks c) Awards and Recognitions (e.g., fellowship in professional societies, etc.) d) External grants and contracts - a sustained record of sponsored research appropriate to the candidate's rank and specialization. 4. Service a) Unit, college, and university service b) Membership and service to relevant professional societies c) Service to the federal, state, and local governments d) Interaction with industry and external research organizations e) Service on editorial boards of archival journals and major conference program committees. f) Community outreach		

V.B Role of Research XX Faculty

The roles of faculty in the Research Professor track are similar to those of TTK faculty but may involve less or no *classroom* teaching; the roles of faculty in the Research Scientist and Research Engineer tracks are similar to those of TTK faculty but without teaching. Research faculty should mentor and co-advise students (campus currently stipulates that they cannot serve as primary advisor) and others (postdocs, technicians) as appropriate to their duties and rank. Contributions to the profession and department/college/campus should be commensurate with rank, although lower in quantity than for the corresponding TTK rank.

One significant distinction between the Research XX faculty and Post Doctoral Associates is that the former are expected to bring in research funding.

V.C Role Differentiation - Research Professor

Research Professors are involved in both the research and educational aspects of the academic mission. Productivity (journal articles, patents, book chapters, conferences, etc.) will generally expected to be less than that for the parallel Professor rank because Research Professors do not generally run a research group of their own. They may be first author on many of the publications because they do more hands-on research, although those who supervise students and postdocs may appear in the (field-specific) corresponding author position or have the corresponding author

designation. Venues and impact of publications are judged the same as for TTK faculty. Research Professors are expected to bring in sufficient funding to run their research programs, which will be consistent with the overall mission of their PI's group and which will grow in size with increasing rank. However, they might be listed as co-PIs rather than PIs on grants, and the amount of funding expected will be lower than for the corresponding TTK rank. Faculty in the Research Professor track may teach classes from time to time, or their educational contributions may be outside of the classroom: they may advise student teams, train users on experimental test equipment, and the like.

V.C.1 Assistant Research Professor

Assistant Research Professors perform independent R&D at a level comparable to Assistant Professor . While initially supported by their PI's grants, they are expected to begin to apply as a PI (when permitted) for single-investigator grants and to be co-PIs on larger proposals. They should demonstrate all the relevant skills required for carrying out research in a university setting and develop a reputation as a "rising star," receiving commensurate recognitions (awards, invited conference talks). Departmental/unit service should include thesis defense committees. Professional service should include reviewing of journal publications and (when permitted) grant proposals, and helping to organize conferences. They are encouraged to co-advise PhD students. Their teaching roles, although a smaller fraction of their duties, are broadly similar to those of Lecturer but do not necessarily include *classroom* teaching.

V.C.2 Associate Research Professor

Associate Research Professors perform research at a level comparable to Associate Professor. They are expected to identify funding opportunities and serve as PIs or co-PIs (when permitted) on large proposals. They should develop an international reputation for preeminence in their particular specialization and to receive commensurate recognitions (awards, keynote addresses). Departmental/unit service should increase and include PTK mentoring and participating in PTK promotion sub-committees. Professional service contributions should be more significant and, when possible, include regular service on review panels for funding agencies. Several PhD students should be co-advised. Their teaching roles, although a smaller fraction of their duties, are broadly similar to those of Senior Lecturer but do not necessarily include *classroom* teaching.

V.C.3 Research Professor

Research Professors perform research at a level comparable to Professor. In addition to the expectations for Associate Research Professor, they should receive international and prestigious recognitions. Service and mentoring obligations increase with the higher rank. Departmental/unit service should include leadership roles, including for PTK sub-committees. Professional service should also include leadership roles and, if possible, journal editorships. Their teaching roles, although a smaller fraction of their duties, are broadly similar to those of Principal Lecturer but do not necessarily include *classroom* teaching.

V.D <u>Role Differentiation - Research Scientist Track</u>

Research Scientists produce and disseminate knowledge. Productivity (journal articles, patents, book chapters, conferences, etc.) will generally be expected to be less than that for the parallel Professor rank because Research Scientists do not generally run a research group of their own. They may be first author on many of the publications because they do more hands-on research, although those who supervise students and postdocs may appear in the (field-specific) corresponding author position or have the corresponding author designation. Venues and impact of publications are judged the same as for TTK faculty. Research Scientists are expected to bring in sufficient funding to run their research programs, which will be consistent with the overall mission of their PI's group and which will grow in size with increasing rank. However, they might be listed as co-PIs rather than PIs on grants, and the amount of funding expected will be lower than for the corresponding TTK rank.

V.D.1 Assistant Research Scientist

Assistant Research Scientists have the same roles as Assistant Research Professors (V.C.1), but do not engage in teaching.

V.D.2 Associate Research Scientist

Associate Research Scientists have the same roles as Associate Research Professors (V.C.2), but do not engage in teaching.

V.D.3 Research Scientist

Research Scientists have the same roles as Research Professors (V.C.3), but do not engage in teaching.

V.E Role Differentiation - Research Engineer Track

Research Engineers focus on realizing things (hardware, software), although they also produce and disseminate knowledge. Activities include designing, building, testing, analysis, project management, and serving as a technical subject matter expert. Annual publication of scholarly works (journal article, book chapter, conference paper, technical report, standard, etc.) and invention disclosures will generally be expected, in addition to other means of knowledge dissemination, including software, standards, procedures, technical reports, and publically available design studies. Venues and impact of scholarly publications are judged the same as for TTK faculty; venues and impact of other outlets should be explained. Research Engineers are expected to bring in sufficient funding to run their R&D programs, which will be consistent with the overall mission of their PI's group and which will grow in size with increasing rank. However, they might be listed as co-PIs rather than PIs on grants, and the amount of funding expected will be lower than for the corresponding TTK rank.

V.E.1 Assistant Research Engineer

Assistant Research Engineers perform independent engineering and research at a level comparable to Assistant Professor. They should be able to carry projects from conception through to prototypes, including application of theory, system specification and evaluation, and directing the work of others on the project. While initially supported by their PI's grants, they are expected to begin to apply as a PI (when permitted) for single-investigator grants and to be co-PIs on larger proposals. They should demonstrate all the relevant skills required for carrying out engineering research in a university setting. Professional service will be more limited than for the other two Research XX tracks, but may include participating in setting standards and industry involvement. They should mentor students, but co-advising of PhD students is not expected. Over time, they may begin to supervise technicians, engineers, and student workers. They should be recognized as a local expert, sought after for advice on design, fabrication, evaluation, etc.

V.E.2 Associate Research Engineer

Associate Research Engineers perform engineering and research at a level comparable to Associate Professor. They initiate new projects with long-term research goals, tackling more complex problems than an Assistant Research Engineer, leading work on multiple, concurrent projects, and managing cross functional engineering teams. They are expected to identify funding opportunities and serve as PIs (when permitted) on large proposals. They should generate significant intellectual property that may be licensed by third parties. Departmental/unit service should increase and include PTK mentoring and participating in PTK promotion sub-committees. Professional service should increase. They should be recognized regionally as an authoritative subject matter expert and receive some professional accolades or awards.

V.E.3 Research Engineer

Research Engineers perform engineering and research at a level comparable to Professor. In addition to the expectations for an Associate Research Engineer, they should tackle problems of considerable scope and complexity with currently non-existent solutions requiring unconventional, novel approaches and sophisticated research techniques. Departmental/unit service should include leadership roles, including for PTK sub-committees. Professional service should also include leadership roles. They should be recognized nationally as an authoritative subject matter expert and receive some prestigious awards, professional society recognitions, or the like.

V.F Promotion Philosophy

Faculty in the Research XX tracks will be expected to demonstrate impact and outstanding performance in the engineering and/or research domains through definitive indicators.

- Appointments at the highest rank will be possible only in unusual cases.
- For promotion or appointment to the Associate or full ranks, the candidate must have a record of knowledge creation and dissemination that can be externally evaluated based on the promotion package.
    - For the Research Scientist and Research Professor tracks, this will substantially be based on a sustained record of impactful scholarly publications.

    - For the Research Engineer track, this will be substantially based on a sustained record of impactful engineered systems and knowledge dissemination, which will include, in addition to scholarly outputs: patents, issued technical reports or procedures, industry adoption of the methods or technologies, software accessible by a range of users, adopted standards, design studies, and the like.
- Candidates will additionally have a record of professional and academic service.
    - For promotion to the Associate rank, service should be comparable to that expected of an Assistant Professor.
    - For promotion to the highest rank, service should be comparable in kind to, but less than the amount of, that expected for an Associate Professor.
    - For promotion to Research Professor, candidates should also demonstrate academic leadership in the department/unit.

V.G Qualifications

Candidates shall document or demonstrate the following.

1. Time in Rank In parallel with the TTK faculty, in general the equivalent of 5 years of full-time work at the current rank. Early promotions are possible if the candidate's qualifications meet the criteria[5]; the candidate needs to make a persuasive case.
    - At least 2 of the 5 years must have been performed in the department(s)/unit(s) in which the candidate is being promoted. The split between departments/units in the case of a joint appointment is not a factor, but the department/unit with the greater fraction will be the primary unit.
    - The number of years for part-time appointments will be calculated as 5years*100/%FTE. (For a 50% appointment, 500/50 = 10 years)
    - Years at another institution in an equivalent position will be counted as equivalent for eligibility, to a maximum of 3 years.

2. Research Record A sustained record of exemplary research and/or engineering as made evident by publications, patents, funding, recognitions, and the like.
    - The publication record should be consistent and strong, as appropriate for the title and rank.
    - Funding should be sufficient to support a robust research effort. The candidate's role in obtaining the funding must be clear, since PTK faculty may not always be named as co-PIs or PIs. The amount of funding controlled, formally or informally, by the candidate should also be clear.
    - Promotion package materials, such as samples of papers, should be of high quality. For scholarly outputs, there should be evidence of scholarly rigor.
    - If applicable, new research areas should be initiated.
    - For Research Professor and Research Scientist faculty, refer to the examples in section IX.D. For Research Engineer faculty, refer to the examples in section IX.A.

3. Teaching Record For the Research Professor track only, a sustained track record of exemplary teaching.
    - Refer to the qualifications in section IV.D.2 and the examples in section IX.A.

4. Other Duties Depending on the duties of the candidate and the level of the promotion, evidence of engagement in education, leadership, mentoring, service, program development, scholarship, and the like. These may include such things as:
    - Co-advising of PhD students; mentoring and training of students, postdocs, technicians, and others.
    - Involvement in the academic mission of the department/unit.
    - Service to the profession, department/unit, college, or university, advisory boards, industry, or government.

Because it is recognized that the roles of researchers vary, the qualifications specified here will be applied in the context of the candidate's specific duties. Because the Research Engineer role may be unfamiliar to evaluators,

[5] By campus policy, expectations related to appropriate time in rank shall not preclude a faculty member from seeking to be reviewed early or from opting not to be reviewed.

examples of considerations that can be taken into account when evaluating excellence in engineering-related scholarship are given section IX.B. Examples for traditional academic scholarship are given in section IX.D.

VI Faculty Specialist Track

VI.A Campus and Engineering Promotion Language

For convenience to the reader, Campus and College language on minimum criteria is provided here.

Table 5: Minimum criteria for appointment and promotion of Faculty Specialist faculty.

	Source	Faculty Specialist	Senior Faculty Specialist	Principal Faculty Specialist
Role	campus	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.		
Academic Degree	campus	The appointee shall hold a Bachelor's degree in a relevant area.	The appointee shall hold a Master's degree or have at least 3 years full-time experience as a Faculty Specialist (or similar appointment at another institution), or its equivalent.	Hold a PhD or have at least 5 years of full-time experience as a Senior Faculty Specialist, or its equivalent.
	ENG	Candidates shall have 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 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 experience as a Faculty Specialist or equivalent.	Candidates shall have a minimum of a PhD degree and 4 years of professional experience in a related area or have at least 5 years full-time experience as a Senior Faculty Specialist or equivalent.
Professional Experience	campus	Show potential for excellence in the administration and/or management of academic or research programs.	Show superior ability to administer academic or research programs, as evidenced by successfully discharging responsibilities such as those of the Faculty Specialist.	A proven record of excellence in managing and directing an academic or research program.
Contract Terms	campus	Appointments to this rank are typically one to three years and are renewable.	Appointments to this rank are typically one to five years and are renewable.	Appointments are typically made as five-year contracts. Appointments for additional five-year terms can be renewed as early as the third year of any given five-year contract.
Other	ENG	Additional Factors to Be Considered (All Faculty Specialist Ranks) Unlike tenured and tenure-track faculty, whose performance is evaluated based on their contribution to research, teaching, and service, the performance of PTK faculty should be evaluated on the primary job responsibilities of the PTK appointment as stated in the individual's offer letter, appointment agreement and/or job description (which may include aspects of research, teaching, and/or service). Other factors the unit may want to consider in reviews of promotion within the Faculty Specialist Ranks may include assessments of the candidates' 1. Potential to make significant contributions to the profession 2. Potential to work collaboratively with professional colleagues 3. Potential for recognition as a leader in the profession 4. Potential to contribute to the achievement of the goals of the College 5. Interest in serving on division, departmental, or university committees 6. Demonstration of creative abilities		

VI.B Faculty Assistants

Faculty Assistants are similar to Faculty Specialists, but the positions are temporary, limited to 3 years. Faculty Assistants are often later appointed as Faculty Specialists or staff.

VI.C Faculty Specialist Roles

The Faculty Specialist track was created to accommodate those who carry out scholarly/academic responsibilities in special niches who may not have a PhD. In some cases, the distinctions between a Faculty Specialist and a staff position are blurry, and the PTK route was chosen because of funding source stipulations, education or salary level,

or industry experience or competition. In general, these roles involve technical work or academic responsibilities; they should not include finance, marketing, communications, or similar work.

Of the PTK titles, Faculty Specialist is the broadest. Some of the jobs in which Faculty Specialists are engaged are shown in Figure 2. The educational and research aspects of these jobs are similar to those described for Lecturer track and Research XX faculty, but there are *technical service* aspects that differ, with examples given in IX.C. Thus, the appropriate criteria for promotion will often be blend of these aspects.

So that evaluators can make an informed and fair decision, each promotion case must include: a) from the candidate, information about their role and their impact and b) from the department/unit, the expectations at each rank for this role, consistent with the overall Engineering promotion philosophy and all pertinent policies.

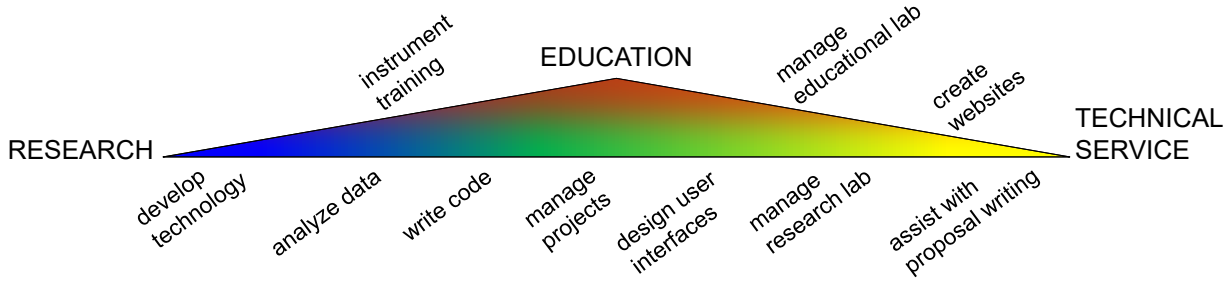


Figure 2. Examples of faculty specialist jobs. Positions on the spectrum are meant to be illustrative.

VI.D Role Differentiation Among Faculty Specialist Ranks

VI.D.1 Faculty Specialist

For a person with a Bachelor's degree, relevant experience as a Faculty Assistant could be counted toward the 2 years of professional experience required for a Faculty Specialist. It must be noted that the minimum requirements for a Faculty Specialist in Engineering are more stringent than those of the campus.

Faculty Specialists are expected to perform their work effectivelhy, the particular work being defined in their contracts, as determined primarily by their supervisors but in some cases also by co-workers or those served. They are expected to make a demonstrable impact with innovative work, to deliver consistently good performance over time, and to demonstrate leadership, good communication, and judgement.

VI.D.2 Senior Faculty Specialist

Senior Faculty Specialists differ from Faculty Specialists in having a higher level of experience and expertise, making them of greater value to the academic mission. Senior Faculty Specialists are expected to mentor less experienced PTK faculty and to participate in PTK promotion sub-committees.

VI.D.3 Principal Faculty Specialist

Principal Faculty Specialists differ from Senior Faculty Specialists in the degree to which their contributions are of benefit and consequence. They take on roles with greater leadership and are expected to have even more substantial impact. Principal Faculty Specialists play significant mentoring roles and to participate in PTK promotion sub-committees.

VI.E Promotion Philosophy

Promotion is based on performance in areas of assigned responsibilities, as demonstrated by definitive indicators.

As a general rule:

- For promotion or appointment to Senior Faculty Specialist, the candidate must have a record of valuable contributions and demonstrated excellence through measurable indicators.

- For promotion or appointment to Principal Faculty Specialist, the candidate's record of valuable contributions must be sustained, and these accomplishments should have earned some degree of external recognition.

VI.F Qualifications

Candidates shall document or demonstrate the following.

1. Time in Rank
   - For promotion to Senior Faculty Specialist, the timeframe is 3 years (unlike the other PTK tracks, for which it is generally 5 years). For promotion to Principal Faculty Specialist, the timeframe is in general the equivalent of 5 years at the current rank. Early promotions are possible if the candidate's qualifications meet the criteria[6]; the candidate needs to make a persuasive case.
   - At least 2 of the 5 years must have been performed in the department(s)/unit(s) in which the candidate is being promoted. The split between departments/units in the case of a joint appointment is not a factor, but the department/unit with the greater fraction will be the primary unit.
   - The number of years for part-time appointments will be calculated as 5years*100/%FTE. (For a 50% appointment, 500/50 = 10 years)
   - Department/unit APPTK plans should specify what kinds of appointments and experience may be counted as equivalent for time in rank.

2. Performance Record A sustained record of performance as made evident by documented outcomes and recognitions by co-workers, "customers", or others.
   - Performance evaluations should be positive overall, although constructive feedback may have been provided. Evaluations should consistently meet or exceed expectations.
   - As appropriate, there should be evidence of effectiveness, improvements, or innovations.

3. Other Duties Depending on the duties of the candidate and the level of the promotion, the candidate should provide evidence of engagement in leadership, mentoring, service, program development, and the like.

Because it is recognized that the roles of faculty specialists vary considerably, the qualifications specified here will be applied in the context of the candidate's specific duties. Units may adopt additional evaluation criteria beyond those described here. Examples of considerations that can be taken into account when evaluating excellence in education are given in section IX.A, for technical work in section IX.A, and for technical service in section IX.C.

[6] By campus policy, expectations related to appropriate time in rank shall not preclude a faculty member from seeking to be reviewed early or from opting not to be reviewed.

VII Clinical Professor Track

VII.A Campus and Engineering Promotion Language

For convenience to the reader, Campus and College language on minimum criteria is provided here.

Table 6: Minimum criteria for appointment and promotion of Clinical Professor faculty.

	Source	Assistant Clinical Professor	Associate Clinical Professor	Clinical Professor
Academic Degree	campus	The appointee shall hold, as a minimum, the terminal professional degree in the field, and professional or board certification when appropriate.		
Professional Experience	campus	Training and experience in an area of clinical specialization. There shall be clear evidence of a high level of ability in clinical practice and teaching in the departmental field. The appointee shall also have demonstrated scholarly and/or administrative ability.	In addition to the qualifications required of an Assistant Clinical Professor, the appointee shall ordinarily have had extensive successful experience in clinical or professional practice in the departmental field, and in working with and/or directing others (such as professionals, faculty members, graduate students, fellows, and residents or interns) in clinical activities in the field. The appointee shall also have demonstrated superior teaching ability and scholarly or administrative accomplishments and have a reputation of respect among colleagues in the region.	In addition to the qualifications required of an Associate Clinical Professor, the appointee shall have demonstrated a degree of excellence in clinical practice and teaching sufficient to establish an outstanding regional and national reputation among colleagues. The appointee shall also have demonstrated extraordinary scholarly competence and leadership in the profession.
Contract Terms	campus	Appointments to this rank are typically one to three years and are renewable.	Appointments to this rank are typically one to five years and are renewable.	Appointments are typically made as five-year contracts. Appointments for additional five-year terms can be renewed as early as the third year of any given five-year contract.

VII.B Clinical Professor Roles

In Engineering, faculty appointed to this track have had substantial experience, typically at least 10 years in length, in the private sector or government, having made significant contributions and having played leadership roles. They typically hold the terminal professional degree in their field. They bring knowledge of today's business, regulatory, or real-world engineering environments, allowing them to bring hands-on field experience to the curriculum and strengthen unit and School ties with government and industry.

These roles generally include administration, curriculum development, teaching, and program leadership. They often have an external focus that involves engagement in business or professional communities or the dissemination of expertise and ideas to relevant external communities. Clinical faculty teach applied practical aspects of the curriculum, not basic required courses. Courses may be short courses and may be designed for non-UMD students. Focus may be on curriculum development and delivery or on starting and managing new programs, such as new undergraduate minors or master's degree programs. Management aspects may include responsibility for budgets and obtaining financial support, hiring and managing staff, evaluating efficacy and impact of programs, and responsibility for enrollments, visibility, ranking, and reputation. Scholarly works are generally either pedagogically or practically focused, such as handbooks or textbooks for practitioners, articles for technical magazines or professional societies, or presentations at educational or professional venues.

VII.C Role Differentiation Among Clinical Professor Ranks

VII.C.1 Assistant Clinical Professor

Given the expected level of prior experience, hiring at this rank would be less appropriate for a majority of cases.[7]

VII.C.2 Associate Clinical Professor

Associate Clinical Professor is often the entry-level position. These individuals should have a regional or national reputation. Depending on the value of the knowledge and experience brought to the position, prior teaching experience is not required. Associate Clinical Professors engage in teaching, curriculum/program development and evaluation, and management as described in VII.B. They participate in department/unit service, including mentoring of PTK faculty, and some campus service. They engage with business and/or professional communities in the field, should be active in their professional communities, and maintain a strong professional network.

VII.C.3 Clinical Professor

Individuals with extraordinary leadership in their profession and a significant national or international reputation can be appointed to Clinical Professor, as can those who have met equivalent promotion criteria at a peer institution. The role of Clinical Professor differs from that of Associate Clinical Professor in the level of responsibility assumed in program development and delivery, including benchmarking, fundraising, growth, and innovation. The expectations for academic and professional leadership and service, and of external recognition, are also greater.

VII.D Promotion Philosophy

Promotion is based on outstanding performance, meaning expectations are surpassed in one or more important areas of assigned responsibilities as demonstrated by definitive indicators. Clinical Professor track faculty will be expected to have a multi-year teaching portfolio that demonstrates sustained commitment to excellence that exceeds the standard teaching obligation.

As a general rule:

- For appointment to Associate Clinical Professor, the candidate must have significant external expertise, demonstrated administrative ability, and the ability to apply that expertise to enhance education in the department/unit (or more broadly) and foster ties with industry or government.
- For appointment to Clinical Professor, the candidate must additionally have a national or international reputation in a relevant industry or government role. For promotion to Clinical Professor, the candidate must have demonstrated sustained outstanding teaching and leadership and be able to clearly demonstrate how the activities in which the candidate has been involved have improved student education. These accomplishments should have earned some degree of recognition outside the department/unit.

VII.E Qualifications

Candidates shall document or demonstrate the following.

1. Time in Rank In parallel with the TTK faculty, in general the equivalent of 5 years of full-time work at the current rank. Early promotions are possible if the candidate's qualifications meet the criteria[8]; the candidate needs to make a persuasive case.
   - At least 2 of the 5 years must have been performed in the department(s)/unit(s) in which the candidate is being promoted. The split between departments/units in the case of a joint appointment is not a factor, but the department/unit with the greater fraction will be the primary unit.
   - The number of years for part-time appointments will be calculated as 5years*100/%FTE. (For a 50% appointment, 500/50 = 10 years)

[7] The First-Year Innovation & Research Experience (FIRE, Program Director Dr. Patrick Killion) at UMD hires new PhDs into this title. Their roles comprise instruction, administration, and research with undergraduate students. Most of these individuals use this position as a launching point to a TTK teaching-focused position elsewhere, although some will stay at UMD and go up the promotion ladder. Dr. Killion views this position as a sort of advanced postdoc. This is quite different from our usage in Engineering.

[8] By campus policy, expectations related to appropriate time in rank shall not preclude a faculty member from seeking to be reviewed early or from opting not to be reviewed.

- Years at another institution in an equivalent position will be counted as equivalent for eligibility, to a maximum of 3 years.

2. Teaching Record For promotion, a sustained track record of exemplary teaching as made evident by course student evaluations, peer teaching observations, alumni feedback, teaching portfolio materials, awards, and the like.[9]
   - Peer teaching evaluations should be positive overall, although constructive feedback may have been provided. Response to constructive feedback should be clearly evident.
   - Student teaching evaluations should consistently meet or exceed the average, or should demonstrate continued improvement. Typically the college average will be used, but for large or difficult courses, another context may be included if appropriate.
   - As appropriate, there should be evidence of teaching effectiveness or improvements in areas such as classroom innovation, more successful methods of teaching, updating content or delivery, better methods of assessment, development or upgrading of laboratories, training and supervision of teaching assistants, and the like.
   - The teaching portfolio materials should be of high quality and show evidence of academic rigor.

3. Managerial and Programmatic Duties Depending on the programmatic responsibilities of the candidate and the level of the promotion, the candidate should provide evidence of: program or degree development, growth, improvement; program efficacy and success; garnering of financial support and effective financial management; good management and training of personnel; positive relationships with external individuals and institutions.

4. Other Duties Depending on the duties of the candidate and the level of the promotion, the candidate should provide evidence of engagement in leadership, mentoring, service, scholarship, and the like.

Because it is recognized that the roles of clinical faculty vary, the qualifications specified here will be applied in the context of the candidate's specific duties. Units may adopt additional evaluation criteria beyond those described here. Examples of considerations that can be taken into account when evaluating excellence in teaching are given in section IX.A; in engineering-related scholarship, section IX.A; in technical service, section IX.C; and in traditional scholarship, section IX.D.

[9] The examples given here are based on current practice. In the future, other methods of evaluating teaching effectiveness may be adopted by the College; in that case these examples should be modified.

VIII Required Materials

The required materials for the promotion package are specified in the ENG APPTK Policy. The required documentation, including the number and types of letters, is summarized in Appendix B.

The required documentation is annotated here with advice to candidates and those assembling packages.

1. (*All*) Current CV
    - Standard UMD format must be used. [10] Use the section headings with the closest fit whenever possible; if absolutely necessary discuss with your promotion subcommittee the use of additional headings.
    - Funding is given in a table with columns showing the start and end dates, contract/grant title, funding agency, role (PI, co-PI), names of co-PIs, total amount, and candidate's share. Provide totals. An explanation of the role(s) of the candidate may be added if it is unclear.
    - For CVs that include publications, the total number of non-self citations and h-index should be indicated (Web of Science Core Collection and Google Scholar) and the ResearchID and ORCID provided. The quality and selectivity of the publication outlets should be explained, and, if unclear, the audience.
    - For scholarly citations, indicate the names of co-authors supervised by the candidate (e.g. by underlining) and the names of advisors or supervisors (e.g. by *). It is typical to boldface the candidate's name. It is helpful to follow the citation with the journal impact factor and the number of citations.
    - For inventions, distinguish between invention disclosures, provisional filings, patents filed, and patents issued.
    - Distinguish invited talks/keynotes at conferences from seminars/colloquia at universities or similar.
    - For student researchers or postdocs mentored or co-advised, give name, topic or thesis/dissertation title, placement, and, if unclear, recognitions received by the student (e.g. best paper award at conference), and role played by the candidate. Scholarly works co-authored by advisees should be noted.
    - The CV must be signed and dated.

2. (*All*) Personal/professional statement (3-4 pages)
    - This statement provides candidates with the opportunity to make a case for their promotion based on a demonstrated record of achievement. The statement should explain and highlight the candidate's key contributions and impact. This is not the same as a description of things the candidate worked on. It is incumbent on candidates to show how their work has contributed to the academic mission of the university and demonstrates excellence.[11]
    - The statement should provide context to the evaluators for understanding the CV and other submitted materials in the light of the candidate's contract. For the top rank in each title track, also keep in mind that campus evaluators will include those from non-STEM disciplines.
    - If the candidate has been involved in collaborative activities, including obtaining funding, the statement should explain the extent of participation and type of contribution.
    - For *Lecturer* and *Clinical Professor* tracks, the statement will highlight the candidate's contributions and impact in education. It may discuss efforts aimed at professional development and growth. It may also discuss the candidate's teaching goals and philosophy, reflections on past teaching practices, efforts to improve and innovate in teaching, and/or critical self-reflection on his or her own teaching evaluations.
    - For the *Research Professor* track, the statement may briefly highlight the candidate's contributions and impact in education; the statement will be seen by the candidate's letter-writers. A lengthier statement can be included in the teaching portfolio.
    - The Personal/Professional Statement must be signed and dated.

[10] Information about the CV for TTK faculty can be found in the campus APT Manual.
[11] Information about the personal statement for TTK faculty can be found in the campus APT Manual.

3. (*Lecturer, Clinical Professor, and Research Professor tracks*) The teaching portfolio should be selective (maximum length 35 pages). There are university templates for the teaching portfolio.
    - *Research Professor track* candidates with 25% FTE or greater devoted to classroom education should submit a teaching portfolio. An abbreviated ("skinny") teaching portfolio (e.g. without course evaluations, syllabi, etc.) may be appropriate for those engaged in only non-classroom educational efforts.
    - For *Clinical Professor track* candidates, depending on the educational activities, there may be deviations from the standard portfolio described here.

    a. List of courses taught by date with enrollments.
    b. Summary of the applicant's numerical course evaluation scores, including appropriate comparative course means, for courses taught at UMD.
        - This summary may be accompanied by a graphic.
    c. Copies of individual course evaluations.
        - Course evaluations may be submitted for courses taught at other institutions or outside of the department/unit within the last five years if they are to be considered in meeting the teaching experience requirement.
        - Evaluations are not required for courses taught more than five years ago outside of the department/unit, even if they are used to meet the teaching experience requirement.
        - For promotion to Principal Lecturer, course evaluations are not required for courses taught within the department/unit as a Lecturer.
        - If student comments are included, then all student comments must be included; it is not permitted to provide selected comments.
    d. Documentation of course innovations and evidence of exemplary instruction.
        - These may include selected syllabi that show the candidate's particular approach to one or more courses and to helping students achieve the learning outcomes; innovative assignments, assessments, or other student activities; selected student work; student feedback.
    e. The Teaching Portfolio must be signed and dated.

4. (**optional** *for those with significant research and service roles*) Up to 10 pages of related backup material for research and service may be provided. Although not required, it may help the candidate to attach sample publications or other examples of their work.

The department/unit shall submit the following materials to the Dean's Office as part of the candidate's promotion package.

5. The promotion package must be a searchable, bookmarked PDF accompanied by a transmittal form.

6. (*Lecturer, Clinical Professor, and Research Professor tracks*) Summary of least one peer teaching observation conducted at UMD within the past five years.
    a. One is the minimum number required by the Engineering APPTK policy (IV.C.5), but a total of three would typically be expected.
    b. This is prepared by the promotion committee and consists of a summary of the pertinent observations, not a verbatim inclusion of reviews submitted by the peer reviewers as candid feedback to the candidate.
7. (*All*) Concise summary of the outcome of the faculty vote on the promotion.
8. (*All*) Letter from the Department Chair or Unit Head.
    a. The letter should address the required qualifications and how they were met.
    b. For *new appointments of Clinical Professor faculty*, the letter should explicitly explain why hiring at the given rank is appropriate.
9. (*All*) Description of duties.
    a. While not required by the current Engineering APPTK policy (IV.C.5), this is needed by evaluators to make sense of the candidate's promotion package. (The proposed revised policy does include this requirement.)
10. (*Varies*) Confidential external letters from respected individuals who can make a hands-off evaluation of the promotion package. The candidate shall not have access to these letters.

a. The usual procedures should be followed for obtaining letters for TTK faculty: provide the relevant materials to the evaluators, summarize the evaluator qualifications and disclose relationships with the candidate, provide a sample evaluation request letter.
b. The letters should address the candidate's impact and how the required qualifications were met.
c. (*For promotion to Principal Lecturer,* ***optional***[12]) Two confidential letters from those within or beyond the department/unit familiar with the candidate's work (typically heads of committees or administrators). For these cases, it is typical that the evaluators will have worked with the candidate in some way.
d. *For Associate Research XX faculty*, at least 4 external letters are required, and for the *Research XX faculty*, at least 5 external letters are required.
e. *For Research Engineer faculty*, it is reasonable to allow 1-2 of the required external letters to be from evaluators who have worked directly with the candidate in some way, such as those from companies or faculty who have benefited from the candidate's work.
f. *For Faculty Specialist track candidates*, 2 confidential letters from those within or beyond the unit familiar with the candidate's work (typically the supervisor or PI for a mid-level promotion, external professional colleagues, or constituents). For these cases, it is typical that the evaluators will have worked with the candidate in some way. Nevertheless, to make a strong case for promotion, letters should be obtained from the most hands-off, distinguished evaluators possible. This is especially important for promotion to Principal Faculty Specialist, where letters from internal colleagues are generally discouraged.
g. *For Clinical Professor faculty,* 2 external letters and 1 letter from the supervisor; 1 additional letter may *optionally* be obtained from a supervised employee. For these cases, it is typical that the evaluators will have worked with the candidate in some way. Nevertheless, to make a strong case for promotion, letters should be obtained from the most hands-off, distinguished evaluators possible. This is especially important for promotion to Clinical Professor, where letters from internal colleagues are generally discouraged.

Units may require additional documentation, such as student letters.

[12] This is <u>not</u> required for Engineering, although other colleges provide these to the campus AEP committee for promotions to Principal Lecturer. Letters are not forbidden for packages for promotion to Senior Lecturer.

IX Examples of Factors to be Considered in Appointment and Promotion

IX.A Examples of Factors to Be Considered for Teaching Excellence

In this section are examples of things that can be taken into account when evaluating excellence in education. The list is illustrative rather than comprehensive, with individual cases varying in the extent to which these criteria are appropriate or relevant.

1. Classroom Teaching Effectiveness
   Application of best practices as recommended by TLTC or the literature; readiness of students for subsequent courses, as evidenced by peer statements; long-term impact, as evidenced by alumni feedback.
2. Teaching Delivery
   Pedagogical analysis, evaluation of effectiveness; new approaches or innovations; range of pedagogies used: lecture-based, project-based, experiential, case-studies, active-learning, peer-learning, inquiry-based, blended, flipped; emphasis on academic integrity.
3. Teaching Load
   Performance can be put into the context of the difficulty of the teaching load, which depends on the range of students taught: 1st year students, seniors, graduate students, special programs, classes with a large number of transfer students; required courses versus electives; high enrollment, particularly of classes with > 80 students; remote students via TV, teaching in off-site locations, education abroad, MOOCs.
4. Curriculum Development
   Design and creation of curricular units ranging from a significant part of a course to a suite of courses; initiation of new education initiatives; revision of homework, topics, lecture materials, labs; development of new teaching materials, manuals, handbooks, software, demonstrations, student projects; incorporation of technology, videography, demonstrations; evidence of impact and relevance of the new curriculum; active, influential participation in departmental curriculum committees; establishment of programs with new partners (US government, foreign universities).
5. Improvements in Student Success
   Academic or career advising; student mentoring; advising or mentoring of student organizations or teams; assisting students outside classroom and office hours; outreach; activities to support underrepresented or underserved students.
6. Program Engagement
   Activities outside of the classroom in support of the educational program: involvement in ABET process; supporting admissions, career services, recruiter engagement; co-curricular activities such as advising student organizations and competitions, assisting and participating in student events; contributions to community-building events, such as Maryland Day; participation in and organization of recruiting events or outreach to underrepresented students, on campus or at conferences and meetings; creation of websites, social media engagement in service of the academic mission; developing, maintaining relationships with industry to support internships, project collaborations, industrial mentoring, Capstone projects.
7. Other Mentoring, Training
   TAs and teaching fellows; other faculty on teaching-related matters; other PTK faculty in professional development.
8. Education Scholarship
   Conducting engineering education research, obtaining education-related grants; presentations at, and participation in, scholarly conferences and workshops on pedagogy; publication in journals of leading pedagogy-focused associations; publication of books; consultation with regional or national organizations.
9. Skill Development
   Teaching training programs; scholarly conferences; workshops on pedagogy.
10. Education-Related Service
    Conducting peer teaching evaluations; collegial coverage of colleagues' courses, frequent guest lectures; active, influential participation in departmental, college, or campus committees, including the University Senate and community-building events; willingness to assume other duties, assist others; educational activities related to the discipline performed beyond the campus; involvement in national or international professional societies; participation in program or application reviews; media contributions, appearances in popular media; community outreach.

IX.B Examples of Factors to Be Considered for Research Engineering Excellence

In this section are examples of things that can be taken into account when evaluating excellence for the Research Engineer and Faculty Specialist tracks. The list is illustrative rather than comprehensive, with individual cases varying in the extent to which these criteria are appropriate or relevant.

1. Engineering
   Invent, design, build cutting edge devices/systems start to finish, from proof-of-concept demonstrations to prototypes for commercialization based on requirements of users and considering a variety of solutions. Evaluate materials, designs, fabrication approaches, new technologies: literature and patent studies, other data gathering; experimentation; modeling and simulation; perform complex modeling, simulation studies; analysis of results, trouble-shooting; optimization. Identify issues with interoperability, integration, testing, and performance.
2. Evaluation and Analysis
   Conduct experimental tests, evaluate results, formulate and implement solutions. Establish procedures for device/ system operation. Apply experience and theory to solve complex problems during system creation, operation.
3. Project Planning, Management, Leadership
   Determine feasibility, translate needs into system requirements, conceptual studies, material and feature selection, specifications and drawings, testing plans, cost estimates, integration. Define requirements, develop designs, specifications, cost estimates. Develop and track budgets; responsibility for funding and expenditures, costs, schedule. Plan, direct, and evaluate work of subordinates and subordinate supervisors. Manage technical subcontracts; evaluate vendor capability; review contractor drawings, tests, other products. Oversee technical integrity and quality of work and deliverables. User interaction and support. Formulate ideas for new devices, systems.
4. Subject Matter Expertise
   Serve as technical subject matter expert and provide advice for engineering issues within the unit, university, and profession; guide project decisions. Understand standard industry practices best practices. Maintain an ongoing awareness of emerging technologies, industry and market trends in order to assess impacts on, and identify opportunities for, new strategies and opportunities. Participate in establishing performance standards, objectives for emerging technologies.
5. Non-Scholarly Knowledge Dissemination
   Technical reports, manuals, SOPs, training materials, software, standards, procedures, design studies. Significant presentations and formal briefings. Information shared on websites, other communications with the public, industry, government, or regulatory bodies. The quality, selectivity, and audience of the publication outlets should be explained.
6. Mentoring, Training
   Mentor, educate, and guide students, postdocs, technical personnel, staff, and faculty in technical aspects of their efforts; mentor other PTK faculty in professional development; lead multi-disciplined technical engineering activities. Ensure technical bench strength.
7. Engineering-Related Service
   Operate laboratories, develop new methods and technologies. Keep records. Establish safety policies and maintain safe working environment, comply with codes, standards, laws, and regulations. Service activities tied directly to the discipline and/or professional field; appointment or election to local or national organizations in the discipline or professional field. Directing activities in the field (i.e., external to the university).
8. Skill Development
   Visit companies/plants, attend seminars and technical meetings to keep abreast of emerging technologies, latest techniques and methods.

IX.C Examples of Factors to Be Considered for Excellence in Service

Below are examples of things that can be taken into account when evaluating excellence for PTK faculty engaged in service. The list is illustrative rather than comprehensive, with individual cases varying in the extent to which these criteria are appropriate or relevant.

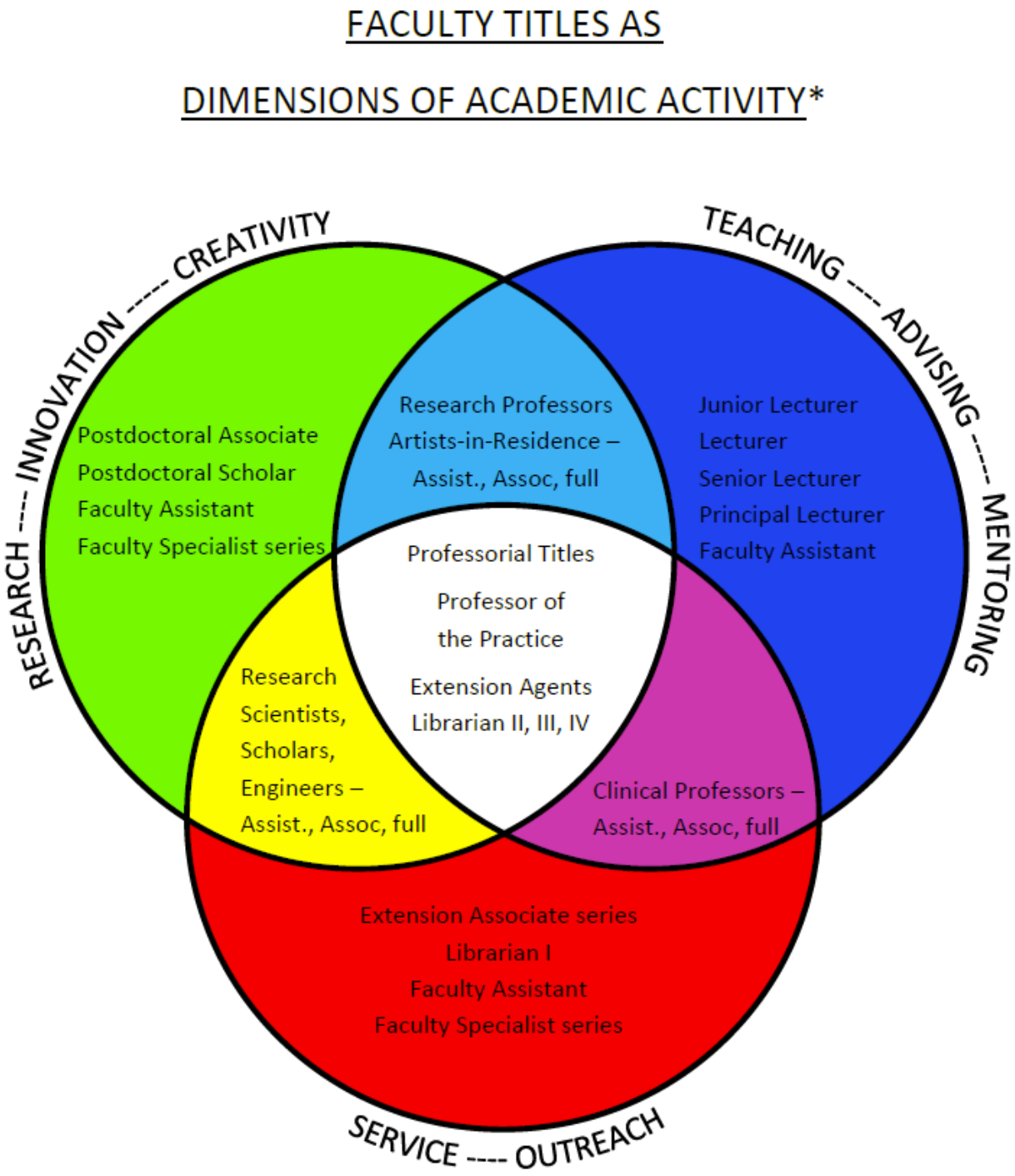
1. Effectiveness, Improvements in Outcomes
   Output metrics may include such things as number of students, customers, or experiments helped/year; $/year handled by the enterprise; # proposals written and $ of additional revenue generated; decrease in # of accidents; increase in database size managed; increase in website traffic; reduction in time required or other improvements in efficiency; # meetings, other activities organized; increase in # reports delivered; # customers supported, measurable increase in customer satisfaction.
2. Extent of Service
   Performance can be put into the context of the number of constituents, the range and variability of duties; recruitment of new partners/constituents (government, industry, academic).
3. Program Development
   Design and creation of new services or initiatives; development or revision of demonstrations, documentation, protocols, handbooks, website content; incorporation of new technology.
4. Innovation
   New ways of delivering services; revisions in SOPs; re-organization of facilities; introduction of new capabilities.
5. Management, Administration
   Number of others supervised, directed, promoted, trained; scope and number of projects directed; size of budget responsible for. Direction of others: professionals, faculty members, students.
6. External Partnerships
   Establishing new connections with external institutions (industry, government).
7. Service to Profession
   Service to trade associations, participation in state boards of professional engineers.
8. Recognitions
   Rankings by peers, supervisors; number of teams, projects participating in.
9. Other Service
   Conducting peer evaluations; collegial coverage of colleagues' duties; active, influential participation in department/unit, college, or campus, including the University Senate; willingness to assume other duties and assist others; activities related to the discipline performed beyond the campus; involvement in national or international organizations, service on advisory panels; publically representing the unit.

IX.D Examples of Factors to Be Considered for Scholarly Excellence

These standard examples of scholarly excellence were taken directly from the campus CV template.

1. Publications
   Books authored, edited, chapters written; refereed journal articles; published conference proceedings.
2. Presentations and Invited Talks
   Talks at conferences, workshops; invited talks and keynote addresses; invited talks at other universities.
3. Funding
   Grants, contracts, gifts.
4. Leadership
   Centers established, directed.
5. Entrepreneurial, Technology Transfer
   Invention disclosures, patents issued, patents licensed; technology transfer to industry; start-up companies.
6. Public Engagement Activities
   Works in public media; interviews and media appearances.
7. Recognitions
   Fellowships in professional societies, prizes, awards; journal covers, best paper awards, press coverage.
8. Advising
   MS, PhD student completion; post-doctoral researchers; undergraduates, and high school researchers mentored. Career placement of advisees; significant awards and recognitions of research advisees; scholarly works co-authored by students.. Other research or technical supervision, participation on thesis/dissertation committees.
9. Scholarly Service
   Unit, college, and university service. journal editorship; conference organizing, workshop organization; membership and service to professional societies and professional society leadership; service on review panels. Service to governmental organizations. Interaction with industry and external research organizations. Provision of expert advice. Community outreach.

Appendix A: Venn Diagram from the Office of Faculty Affairs



*The position of a specific title in the diagram should not be interpreted as policy regarding the duties of faculty so titled. The diagram is meant to demonstrate how the range of non-traditional faculty roles and titles can be understood within the traditional dimensions of academic activity.

Appendix B: Summary of Required Documentation

Title, Rank	Step	**nomination** letter*	candidate's **CV**	candidate's professional **statement**	candidate's **teaching** portfolio	summary of instructional activities	course enrollments	student evaluations	**peer evaluation** of teaching (at least one)	description of **duties****	**sample** request for letters***	external letters	result of unit/ department **vote**‡	date	vote counts	ranks of voters	explanation if needed	letter from unit head or department **chair**	**Review by College**
			candidate signature/date required																
Lecturers																			
Lecturer	appointment	✗	✗	✗	✗	×	×	×	✗	✗	✗	✗	✗	×	×	×	×	✗	✗
Senior Lecturer	appointment	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	Dean's Office
Principal Lecturer	appointment	✓	✓	✓	✓	✓	✓	✓	✗	if	if	**1-2** op.†	✓	✓	✓	✓	✓	✓	College AEP
Senior Lecturer	promotion	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	Dean's Office
Principal Lecturer	promotion	✗	✓	✓	✓	✓	✓	✓	✓	if	if	**1-2** op.†	✓	✓	✓	✓	✓	✓	College AEP
Research Professor/Scientist/Engineer																			
Assistant	appointment	✓	✓	✓	✗	×	×	×	✗	✓	✓	3	✗	×	×	×	×	✗	✗
Associate	appointment	✓	✓	✓	✗	×	×	×	✗	✓	✓	4††	✓	✓	✓	✓	✓	✓	Dean's Office
Full	appointment	✓	✓	✓	✗	×	×	×	✗	✓	✓	5††	✓	✓	✓	✓	✓	✓	College AEP
Associate	promotion	✗	✓	✓	✗	×	×	×	✗	✓	✓	4	✓	✓	✓	✓	✓	✓	Dean's Office
Full	promotion	✗	✓	✓	✗	×	×	×	✗	✓	✓	5	✓	✓	✓	✓	✓	✓	College AEP
Faculty Specialists																			
Faculty Specialist	appointment‡‡	✗	✗	✗	✗	×	×	×	✗	✗	✗	✗	✗	×	×	×	×	✗	✗
Senior Faculty Specialist	appointment‡‡	✓	✓	✓	✗	×	×	×	✗	✓	✓	2†††	✓	✓	✓	✓	✓	✓	Dean's Office
Principal Faculty Specialist	appointment‡‡	✓	✓	✓	✗	×	×	×	✗	✓	✓	2†††	✓	✓	✓	✓	✓	✓	College AEP
Senior Faculty Specialist	promotion	✗	✓	✓	✗	×	×	×	✗	✓	✓	2†††	✓	✓	✓	✓	✓	✓	Dean's Office
Principal Faculty Specialist	promotion	✗	✓	✓	✗	×	×	×	✗	✓	✓	2†††	✓	✓	✓	✓	✓	✓	College AEP

* 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.
Helps letter-writers and higher-level reviewers understand the dossier.

*** Applies only if letters are requested.

‡ Voting eligibility and committee vary by title - see policy.

‡‡ Nominations can also come from PTK faculty members in the unit.

† Not addressed in ENG policy; some other colleges do this.

†† The nominating letter may be subsituted for one solicited letter.

††† From internal or external professional colleagues, supervisor or PI, employees, or constituents.

General Guidance

Please use the transmittal form (which has too many docouments) and put the materials in that order in a bookmarked PDF.

Use the formats and follow the procedures for TTK promotion dossiers.

- CVs should be in standard campus format.
- CVs must be accurate.
- Personal statement should address candidate's relevant accomplishments.

For external letters:

- Disclose and explain the use of referees with relationships to the candidate: advisors, groupmates and other academic siblings, etc.
- Include the qualifications of the referees.