**Criteria for Research Faculty**

**Ira A. Fulton Schools of Engineering**

Approved by the Assembly of the Ira A. Fulton Schools of Engineering on November, 26 2018

Reviewed by the Dean on June 5, 2019

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The Ira A. Fulton Schools of Engineering (Fulton Schools) emphasize impact to society throughout our academic and research programs, fostering intellectual fusion between engineering and other non-engineering disciplines, and our commitment to student success are evidence of this. These are attributes that we feel will ultimately define the great engineering schools of the 21st century.

Key attributes of Arizona State University (ASU) are its emphasis on access, excellence, and impact and its eight design aspirations (leverage place, transform society, value entrepreneurship, conduct use-inspired research, enable student success, fuse intellectual disciplines, be socially embedded, and engage globally). The Fulton Schools embrace those and seek to be the exemplar for large colleges and schools at Arizona State University.

The Fulton Schools' reputation will be built in part on the attributes and aspirations discussed above, but will also depend in part on output metrics that are visible and of importance to the external community and our customers; for example, these include:

1. The number, quality, preparedness, and success of our students,
2. The external reputation and recognition of the achievements of our faculty,
3. The impact that our innovations, inventions, and discoveries ultimately have on transforming society,
4. The magnitude and reputation of our externally-funded research enterprise, and
5. The generation of intellectual property, inventions, and new companies.

The promotion criteria discussed in this document are aligned with the attributes, aspirations, and output metrics discussed above to ensure that the Fulton Schools build and reward a faculty that is committed to and capable of achieving its goals and those of Arizona State University. We aspire to have a faculty that overall is known for its creativity, collaborative nature, excellence in student instruction and mentoring, scholarly productivity, entrepreneurial activities, and impact to society and the world.

Fixed-term research faculty members contribute to these aspirations and the output metrics listed above, with those contributions being primarily weighted to (b) through (e).

In the following, high-level expectation statements are given for each of the major steps in fixed-term research faculty career progression. These are followed by more detailed examples of faculty accomplishments that are considered when assessing and making recommendations on promotion cases.

From within the Fulton Schools, four evaluations are performed for each promotion application, and each evaluation yields a recommendation as to whether or not the applicant should be promoted. The evaluators, in order of sequence of their evaluations, include:

* a school-level committee consisting of faculty from the school in which the applicant is appointed, augmented by one research professor if there is at least one research faculty member currently appointed at that rank,
* the Director of the school in which the applicant is appointed,
* Fulton Schools-wide committee (Dean's Faculty Advisory Council) consisting of faculty from the different Fulton schools, augmented by one research professor if there is at least one research faculty member currently appointed at that rank, and
* the Fulton Schools' Dean.

It is important to recognize that promotion decisions for fixed-term research faculty are made by the Provost, with consideration of the evaluations discussed above.

1. **Expectations for Fixed-Term Research Faculty Career Progression**
   1. **Expectations for Advancement from Research Assistant Professor to Research Associate Professor**

In brief, those receiving favorable recommendations will have a record of accomplishments such that evaluators conclude that the applicant is capable of, and will continue to contribute to the goals of the Fulton Schools and ASU at a level expected of research associate professors. More specifically, the following are expected:

* substantial output from research and entrepreneurial activities, at the level expected of research associate professors,
* national/international recognition of innovative and impactful research and/or entrepreneurial activities (service activities such manuscript and/or grant reviewing, serving on editorial boards, etc. are desirable and provide some indication of professional contribution and impact),
* demonstrated ability to secure external funding as a co- or principal investigator on grants and research contracts at a level sufficient to fully fund the research faculty position and research efforts,
* participation in graduate student mentoring by serving on, and chairing as appropriate, thesis or dissertation committees,
* positive interactions and collaborations with other faculty, and
* a record of accomplishments that provides evaluators with confidence that the applicant for promotion will continue to evolve and secure resources for a research and/or entrepreneurial program that produces impactful results and continue to grow in professional stature and recognition.
  1. **Expectations for Advancement from Research Associate Professor to Research Professor**

In brief, those receiving favorable recommendations will have a record of accomplishments such that evaluators conclude that the applicant is capable of and will continue to contribute to the goals of the Fulton Schools and ASU at a level expected of research professors. More specifically, the following are expected:

* substantial output from research and entrepreneurial activities, at the level expected of research professors,
* national and international recognition as a leader in innovative and impactful research within their area of expertise and/or entrepreneurial leadership in bringing technical innovation to the marketplace,
* demonstrated ability to consistently secure external funding as a principal investigator on grants and research contracts, and with cumulative external funding as principal and co-investigator at a level sufficient to fully fund the applicant's research faculty position and research efforts,
* participation in graduate student mentoring by serving on, and chairing as appropriate, thesis or dissertation committees
* positive interactions and collaborations with other faculty including development of funded research opportunities for tenured/tenure track faculty, research faculty and/or students, and
* a record of accomplishments that provides evaluators with confidence that the applicant for promotion will continue to evolve and secure resources for a research and/or entrepreneurial program that produces impactful results and continue to grow in professional stature and recognition.

Comments for some of the bulleted items are provided below in Section 3.

1. **Comments on Expectations for Promotion**

In the following, examples are given of typical indicators considered when assessing if an applicant meets the bulleted promotion criterion listed above in Section 2. These examples are not meant to be exclusive or limiting; other relevant indicators may be proposed by the applicant and, if so, these will be considered by the evaluators.

* **Substantial output from research and/or entrepreneurial activities, and recognition of innovative and impactful research and/or entrepreneurial activities**

The Fulton Schools recognize all innovative and impactful research, no matter where it falls in the fundamental/basic - translational - applied research spectrum. It also recognizes research that crosses and extends beyond traditional disciplinary boundaries. This is necessary to achieve its goals related to intellectual fusion, societal impact, and the magnitude and external recognition of its research enterprise. Additionally, intellectual property development with associated technology or knowledge transfer, especially to commercial entities that are able to develop and deploy commercially viable technology or products, reflects innovation, impact, and contributions to entrepreneurship.

Indicators of research output, innovation, impact, and entrepreneurial activity include:

1. peer-reviewed archival publications, including journal articles, book chapters, and monographs¹,
2. peer-reviewed conference presentations/publications,
3. input from confidential external reviewer letters, written by experts in the applicant's field, that attest to the significance and impact of the output from the research and entrepreneurial activities,
4. the use of the output from the applicant's research and entrepreneurial activities by others for their research and entrepreneurial activities,
5. successful proposals for external support of research activity,
6. national and international “awards for research activity,
7. invitations to give talks at national or international meetings,
8. invention disclosures, patent applications, and patents,
9. creation of new commercial entities or organizations that will incubate, develop, and deploy technologies resulting from research or transfer results from research into existing commercial entities,
10. meaningful contributions to science and technology policy debate, development, and deployment²

* **External funding**

External funding is viewed by the Fulton Schools to be a critical enabler of graduate student mentoring and innovative and impactful research and entrepreneurial output. As such, all sources of external funding are considered.

* **Positive interactions and collaborations with other faculty**

The Fulton Schools rely primarily on the school-level reviewers (faculty committee and school director) to provide input for this assessment.

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¹Candidates should provide supporting evidence (for example, referees' reports and acceptance rates) that will yield insight into the quality and significance of any work reported for items 3a and 3b.

²Examples might include testifying as an expert in front of state or national legislatures, writing white papers supporting the development and implementation of appropriate policies; and participating in NAE, NAS, or NRC committees and panels.

1. **General Remarks on Implementation of the Criteria**

* It is recognized that research may involve multiple collaborators from a range of disciplines, and that some faculty member’s research programs may be highly collaborative. This is encouraged in the Fulton Schools and reviewers should consider this to be a positive attribute in evaluating applications for promotion. Having said that, the Fulton Schools expect those applying for promotion to research professor appointment to be capable of contributing to multi-investigator efforts in both lead and supportive roles, and for their contributions to be significant and lead to research pursuits that would not be possible without their involvement.
* In evaluating the various activities of applicants, *quantity* alone cannot be the deciding factor. The *quality, significance,* and *impact* of each contribution must be considered, ideally within the framework of appropriate national expectations. Evaluators must be confident and conscientious enough so that routine activity is not mistaken for serious accomplishment.
* Evaluators must be satisfied that sufficient evidence of a continuing and maturing satisfaction of the various criteria is present in all cases.
* It is expected that these criteria will also guide the determination of the appropriate academic status for individuals joining the Fulton Schools faculty above the rank of research assistant professor.
* In section 2, the phrases "expected of a research associate· professor' and "expected of a research professor' appear, but those expectations are not always explicitly defined in this document. That is intentional as any expectations are relative to the norms of different fields within the Fulton Schools' expectations for each of its schools and programs, and those will vary across the Schools. The Fulton Schools expect their evaluators to provide context for their determination as to whether or not expectations are met or not met; for example, by citing the school or program expectations.