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**Date**



UNIVERSITY of HAWAI'I at MĀNOA™

**MECHANICAL ENGINEERING**

**DEPARTMENT OF MECHANICAL ENGINEERING  
TENURE AND PROMOTION CRITERIA**

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Approved by the Mechanical Engineering Department faculty

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This document  
replaces the "Criteria and Guidelines for Evaluating Faculty Tenure and  
Promotion Applications" (Version May 15, 2001), last approved by the  
Mānoa Chancellor's Office on September 18, 2015,  
and  
has been created  
in compliance with the existing Collective Bargaining Agreement  
(Version 2017-2021) and University of Hawai'i at Mānoa Criteria  
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# DEPARTMENT OF MECHANICAL ENGINEERING TENURE AND PROMOTION CRITERIA

## PREAMBLE

The University of Hawai'i at Mānoa Department of Mechanical Engineering has created this document in order to guide the preparation and evaluation of tenure and promotion with transparency, clarity, and flexibility. As articulated in the corresponding sections below, the evaluation of tenure-track faculty is based on excellence of contributions to teaching, research, and service. It is the responsibility of the faculty applicant to demonstrate, in the submitted dossier, that they meet the criteria as articulated.

Furthermore, we emphasize the following overall principles for evaluation of tenure and promotion applications and related materials:

1. The candidate must meet applicable criteria established by the University of Hawai'i at Mānoa. The criteria presented here define the applicable University criteria in the context of the Department of Mechanical Engineering.
2. Excellence in teaching, research, and service is demonstrated by the impact of the candidate's contributions to these activities. Although not every bold idea may succeed, faculty members are encouraged to pursue creative and innovative approaches to the most difficult engineering and societal challenges.
3. The details below highlight evidence that demonstrates contribution and impact of the candidate's activities. Evaluators are encouraged to conduct holistic assessments of impact based on all available evidence rather than rely on quantified, isolated metrics.
4. Activity in the Department of Mechanical Engineering encompasses multiple disciplines and an array of diverse methodologies and means of scholarly communication. As such, faculty at the Department may contribute to teaching, research, and service in myriad ways. Therefore, evaluators should assess applications and related materials with respect to the standards of the candidates' research area(s), including but not limited to interdisciplinary work.
5. Accomplishments since the last personnel action (hiring, promotion, etc.) shall form the bulk of material considered for evaluation, including the summation of contributions and the rate of productivity and accomplishment at the time of assessment.
6. Some activities, such as mentoring or activity in support of equity and inclusion of underrepresented and minority groups, do not fall exclusively into the categories of teaching, research, and service.
7. The granting of tenure shows that the University has a present and long-term need for a faculty member (see applicable University criteria). Candidates who meet the criteria below are eligible for tenure at the rank to which the candidate is applying.
8. The criteria below summarize key expectations in each major area for the ranks of Associate and Full Professors. These are not to be interpreted as checklists. Not every criterion must be individually satisfied. The standard for tenure and/or promotion is that the criteria shall be substantially met in a comprehensive evaluation of each candidate's case.

## TEACHING

Teaching excellence is demonstrated by the quality of classroom instruction, impact on the curriculum, and advising of students. The applicant is expected to demonstrate a high level of competence and the categories below provide guidance to what constitutes this achievement. In assessment of teaching, evaluators should acknowledge limitations of information, and bias that may arise from applying too much weight to individual measures such as evaluation scores or sources.

**Classroom instruction.** Evidence for excellence in classroom instruction may include:

- Demonstration of breadth in level and topic across courses taught, understanding that departmental needs may constrain which classes are taught.
- Optional faculty peer evaluations,
- Promotion of diversity, equity, and inclusion in teaching
- Student feedback,
- Syllabi and class materials, and
- Teaching evaluations administered by the University or Department.

**Curriculum.** Substantial impact on the curriculum may be demonstrated by:

- Contributions to content and operation of educational programs.
- Course revision,
- Development and approval of new courses,
- Innovations in pedagogy or delivery, and/or
- Teaching new courses.

Evidence for curricular impact may include:

- Course materials,
- Course revision or development,
- Documentation of innovations in pedagogy or delivery,
- Publications or public presentations about teaching innovations, and
- Syllabi.

**Mentoring, advising, and supervision.** Evidence for faculty mentoring, advising, and supervision may include:

- Advising student teams, clubs, or groups,
- Mentoring/advising/supervision of graduate students and postdoctoral researchers as related to teaching,
- Mentoring/advising/supervision of undergraduate students and undergraduate student projects, including cross-disciplinary projects, and
- Supervision of field work, clinical, or practicum experiences.

**Additional evidence of teaching excellence.** Other opportunities to demonstrate teaching excellence may include, but are not limited to:

- Development of interdisciplinary or extracurricular opportunities,
- Improvement or development of instructional laboratories and infrastructure,
- Outreach related to teaching,
- Participating in or developing activities that support of diversity, equity, and inclusion, in particular with respect to underrepresented and minority groups,
- Short courses and workshops,
- Teaching recognition and awards, and
- Textbook or other educational publications.

For all bulleted lists in this section and in all other sections of this document, the bulleted items are presented in no particular order.

For teaching, the criteria for tenure and/or promotion to **Associate Professor** are satisfied by clear evidence of teaching achievement, which should include but is not limited to:

- Building a record of advising students as related to teaching.
- Developing and establishing a record towards excellence and versatility in teaching contributing to all levels of the Department's instructional programs and to the University's educational mission, and
- Developing, updating, or revising courses, or innovative classroom technique.

The criteria for tenure and/or promotion to **Full Professor** are satisfied by clear evidence of teaching achievement, which should include but is not limited to:

- Continual record of achievement in advising students as related to teaching, including multiple levels,
- Maintaining a record of continual excellence and versatility in teaching contributing to all levels of the Department's instructional programs and to the University's educational mission, and
- Sustained record of developing, updating, or revising courses, or innovative classroom technique.

## RESEARCH

Research excellence is demonstrated by the impact and originality of the candidate's research in academic and engineering communities, and in industry, engineering practice, and society at large. To be successful, the candidate should have built an independent research program, defined by area of study, issues addressed, methods developed, and contributions of import attributed to the candidate. Evidence of excellence in research includes publication, mentoring of graduate students and post-doctoral fellows, and extramural funding.

**Publication.** The standards and conventions of publications vary by discipline within engineering and science, therefore a publication record must be judged relative to the type of publication and venues (e.g., journal, conference, book chapter, books, etc.) considered most relevant within the candidate's field. For multi-authored publications, the type and proportion of time and effort of the contribution of the candidate should be clearly indicated, as required by the criteria established by the University of Hawai'i at Mānoa. Scholarship may be demonstrated by a publication record, including the number and quality of publications. Measures of impact of publication include:

- Documentation of impact of the candidate's publications (e.g., using publication indices and related metrics),
- Evaluations of experts in the candidate's research area(s),
- Subsequent citations of the publication, and
- The standing and selectivity of the publication and venue, including the peer review procedure.

**Mentoring of Graduate Students, Postdoctoral Fellows, and Research Personnel.** Education of future generations of researchers is vital to lasting impact in research. Evidence for excellence in mentoring may be demonstrated by:

- Number of M.S. students supervised to completion of MS thesis and MS degree,
- Number of Ph.D. students supervised past the comprehensive examination, to completion of the Ph.D. dissertation, or to completion of the Ph.D. degree,
- Number of postdoctoral fellows and other research personnel supervised, and duration of supervision,
- Quality and number of publications with the mentee, and/or
- Undergraduate research mentorship.

**Funding.** Securing extramural funds is essential to establishing and sustaining an impactful research program. The source and amount of funding may vary by area, therefore the funding shall be considered in light of the candidate's research endeavors. For collaborative research, the contribution of the candidate should be clearly stated. Success in securing sponsored funding may be demonstrated by:

- Amount of funding awarded and associated accomplishments relative to date and amount of award,
- Evidence of evaluation by the sponsors in competitive research funding programs,
- Number of graduate students, undergraduate students, postdoctoral fellows, and others supported by extramural funds,
- Receipt of other funding, such as sponsored research contracts or grants, and/or
- Support for acquisition of research equipment or development/renovation of research laboratories or facilities.

**Additional evidence of research excellence.** Other valid measures of research excellence related to the candidate's research, may include, but are not limited to:

- Fellowships,
- Granted patents, utility patents, non-provisional patent applications, provisional patents, and other intellectual property,
- Impact on public policy or discourse, community, society, science, or engineering practice,
- Intramural research funding,
- Invited lectures and presentations,
- Media reports and coverage,
- Number of graduate students, undergraduate students, postdoctoral fellows, and others supported by intramural funds,
- Research awards,
- Reviews of the grant proposals by extramural funding agencies, and
- Technological entrepreneurial activity.

For research, the criteria for tenure and/or promotion to **Associate Professor** are satisfied by clear evidence of research achievement, which should include but is not limited to:

- Building a record of scholarly publication in germane forums,
- Establishment of an independent research program including mentoring as defined above,
- Evidence of successfully funded extramural research as a lead principal investigator, co-principal investigator, and/or co-investigator on a competitive national award, or institutional lead principal investigator for a multi-institution award,
- Evidence to secure resources necessary to support the candidate's research program,
- Letters of external evaluation, as a group collectively supportive of the candidate,
- One or more Ph.D. students with significant progress towards graduation, such as paper publications or other scholarly output, and
- Postdoc, Ph.D. student, M.S. student, or undergraduate student co-authorship of publications.

The criteria for tenure and/or promotion to **Full Professor** are satisfied by clear evidence of significant research accomplishment, which should include but is not limited to:

- Continual record of contribution to scholarly literature,
- Continual record of extramural research funding, ideally from diverse sources, commensurate with maintaining a robust and leading research program in the candidate's area,
- Continual record of success in mentoring as defined above, including graduation of one or more Ph.D. students,
- Cumulative evidence of publication impact,
- Established national and/or international reputation in the candidate's area based on identified research contributions,
- Evidence of successfully funded extramural research as a lead principal investigator on a competitive national award, or institutional lead principal investigator for a multi-institution award,
- Letters of external evaluation, as a group collectively supportive of the candidate,
- Maintaining an active research program, preferably having funded research at the time of application, and
- Placement of graduated students and other mentees.

## SERVICE

Excellence, leadership, and contributions in service are expected to increase with experience in the Department. Service includes activities both internal to the University of Hawai'i at Mānoa and external, to the academic and engineering community and society at large. In general, documented quality and impact of service performed is more important than quantity of service activity. Leadership in service may be demonstrated by activities such as:

- Innovative or motivated approaches in identifying and resolving service needs,
- Outreach and other activities in support of diversity, equity, and inclusion, in particular with respect to underrepresented and minority groups,
- Participation in the governance of the university or external organizations, and
- Performance in appointed duties.

**Internal Service.** Measures of impactful leadership in internal service to the missions of the Department, the College, and the University include:

- Advising assigned students for registration,
- Provision and management of laboratory services or access,
- Service on committees or other leadership functions for administration and governance,
- Service on committees related to educational objectives, and
- Service on graduate student committees.

**External Service.** External activities promote goodwill and visibility for the candidate (and the University), and provide opportunity for impact on society, including the broader academic and research community, and the State of Hawaii. Leadership in external service may be demonstrated by engagement with:

- Broader contributions to society, including the academic and research community,
- Government agencies (or other research sponsors), such as in reviewing grant proposals,
- National or international technical committees,
- Organization of professional meetings and workshops,
- Professional societies,
- Publishers (such as membership in editorial boards, or reviewing manuscripts and books), and others, and/or
- Receipt of external recognition and awards.

The criteria for tenure and/or promotion to **Associate Professor** are satisfied by clear evidence of service activity, which should include but is not limited to:

- Demonstration of active service to the Department, College, and/or University, such as participation on committees or other internal service tasks,
- Demonstration of participation in service to the professional community,
- Developing reputation in candidate's area based on identified contributions, and
- Emerging leadership in service as identified above.

The criteria for tenure and/or promotion to **Full Professor** are satisfied by clear evidence of service activity, which should include but is not limited to:

- Continual active service to the Department, College, and/or University, such as participation on committees or other internal service tasks,
- Continual participation in service to the professional community,
- Established reputation in candidate's area based on identified contributions, and
- Recognized leadership in service as defined above.



## ACKNOWLEDGEMENT

This document was prepared by the 2020-2021 Mechanical Engineering policy and procedure committee and approved by the faculty of the Department of Mechanical Engineering on May 6, 2021. This document was based on research into best practices in Tenure and Promotion review as understood at the time of approval, and drew inspiration from similar documents from many institutions. In addition to the previous Tenure and Promotion Criteria document from our Department, sources of ideas included documents from the Civil and Environmental Engineering, Electrical Engineering, and Mathematics departments among others at the University of Hawai'i at Mānoa, and documents from the following institutions: University of Virginia, University of Tennessee Knoxville, University of Texas at Austin, University of South Florida, Cornell University, University at Buffalo, University of Washington, University of Missouri, Carnegie Mellon University, Northwestern University, University of Florida, University of Colorado Boulder, Clemson University, and particularly the University of Michigan.