


Mechanical Engineering Department
The College of New Jersey
Disciplinary Standards for Reappointment, Tenure, and Promotion

The attached disciplinary standards have been reviewed and approved by the Committee on Faculty Affairs, the Council of Deans, and the Provost.

To avoid creating a moving target for candidates for reappointment, the disciplinary standards in effect during a faculty member's first year of employment will be used for reappointment and tenure applications. Candidates for promotion will use the disciplinary standards in effect in the year in which they apply for promotion.



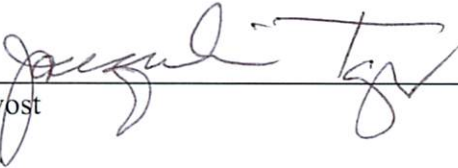
(Manish Paliwal)
Department Chair

May 11, 2018
Date



Dean

May 11, 2018
Date



Provost

5/16/18
Date

The Mechanical Engineering Department will next review its disciplinary standards in Academic Year 2023.

Disciplinary Standards for Reappointment and Promotion
Department of Mechanical Engineering
The College of New Jersey

The disciplinary standards for the faculty of the Department of Mechanical Engineering are consistent with the mission of: a) The College of New Jersey (TCNJ), b) the School of Engineering, and c) the Department of Mechanical Engineering.

The TCNJ *Reappointment and Promotions Document (RPD)* provides the timeline and processes for reappointment, and promotion at the College. The policy also mandates the application format, and outlines candidate responsibilities. Candidates are strongly encouraged to become intimately familiar with the College's reappointment and promotion policies.

The present document is supplemental to the College Reappointment and Promotion Policy and provides supplemental guidelines to offer specific interpretation of the general standards with respect to scholarly activities to clarify departmental expectations. It is understood that TCNJ is primarily an undergraduate institution where faculty members are expected to be accomplished and engaged teacher-scholars and students are expected to be accomplished and engaged learners.

This document for Faculty scholarship should be reviewed at a minimum of every 5 years by the Department. Any proposed changes to the document must be voted on by the Department.

Taking guidance from the broadly defined attributes for each rank offered by the Reappointment and Promotions Document (RPD) standards relevant to the Mechanical Engineering department are defined. Fundamentally, it is important to illustrate at each rank that the contributions of faculty member should be impacting, meaningful, positive, and sustainable. The difference in the standards for different ranks should be related only to the maturity level of those contributions, not the type. In other words, all faculty members should be involved in similar types of endeavors; however, the combination of quantity, quality, intensity, and success level would be expected to be higher for a candidate applying for Professor rank than one to Associate Professor rank.

Disciplinary Standards for Scholarly Activity

The *Reappointment and Promotions Document (RPD)*, states, "TCNJ embraces the model of a professor as a teacher-scholar". The College recognizes the need for faculty to actively engage in research projects relevant to their field, and to publish scientific findings in respected refereed journals. The range of modes of scholarship accepted by the Department is limited to Discovery, Integration, and Application:

1. The Scholarship of Discovery – the traditional research model in which new content knowledge is acquired;
2. The Scholarship of Integration – the creation of new knowledge by synthesizing and making connections across disciplines or sub-disciplines;

3. The Scholarship of Application – the bridging of the gap between theory and practice through both research and action.

A key facet of the teacher-scholar model is the role of a faculty member as a teacher of scholarship to undergraduate students. Engagement of students in undergraduate scholarly activities not only enhances a research project by allowing more efficient and consistent execution of its tasks, but also affords the students a learning experience that is not attainable in typical classroom settings. Faculty should thus strive to serve as mentors who pass their knowledge and expertise about a particular topic to their students, who can gain a sense of fulfillment from contributing to new knowledge or pedagogy.

Regarding scholarly activity, the committees involved in the evaluation of candidates should take into account the nature of the work and field (e.g. experimental vs. numerical, emerging technology vs. more mature technology, etc.), and the difficulties involved in completing research in each field. The quality of the research is of more importance than mere quantity; although candidates for re-appointment, or promotion are expected to consistently engage in new research and to bring new projects to fruition. The quality of the scholarly research is defined by its significance to one's field of study, and requires peer-review to validate the significance of the work; hence, the importance of the publication of research in refereed journals. The entire body of an applicant's research history is applicable for illustrating a pattern of continued scholarship, but works finished since appointment at TCNJ or since the last promotion are required for promotion, and carry greater weight.

Faculty need to initiate and maintain a sustainable research program in a field of study relevant to Mechanical Engineering that will support faculty-oriented and student-supported research efforts. Adequate infrastructure to support both faculty and student-supported research should be established. Collaborations are encouraged, but not at a level that will limit the ability of the faculty to perform individually directed research programs. In a collaborative effort, the faculty member must be a major contributor to the work and needs to demonstrate that the work could not have been done without the individual's contribution.

Interdisciplinary Work:

The productivity of a faculty member in discipline-related research may be complemented by productivity in interdisciplinary scholarship. Types of interdisciplinary scholarship, either cross-departmental or interschool collaborations, include interdisciplinary research, pedagogical research, and development of interdisciplinary projects in education or practice.

For interdisciplinary work, scholarly activity should be evaluated in the "same manner" as previously, with primary emphasis being given to refereed journal publications and submitted grant proposals that initiated or sustained a significant research endeavor.

Guidelines for Scholarly Achievement:

A successful scholarship program can be defined by: 1) several projects in different stages of development or a systematic plan for one's projects; 2) primary responsibility for a significant portion of one's scholarship; 3) research initiated at TCNJ; and 4) an appropriate history of the dissemination of scholarly product(s) in peer-reviewed formats; 5) student involvement.

The following list is not all-encompassing, but does offer several avenues for acceptable endeavors that are suitable paths for the fulfillment of scholarly activities for faculty seeking reappointment and tenure, and promotion. All faculty members should strive to excel in a combination of such endeavors.

Faculty need to publish relevant research in high-quality, peer-reviewed journals.

When publishing the results of their research, if the publication has multiple authors, faculty need to explicitly state the contents of their individual contribution. The individual contribution of the faculty member will be considered when evaluating the overall scholarly record of the candidate.

In addition to the publication of scholarly work, faculty members are expected to further their scholarship through a combination of the following endeavors:

- ◆ Present and/or publish relevant research in high-quality conferences.
- ◆ Obtain external funding for equipment and research. Potential sources include not-for-profit organizations, government sources, and private companies. While procurement of external funding is not a requirement for tenure or promotion, obtaining a competitive major funded grant from a source which utilizes a peer review process can be counted towards one's final scholarship outcomes. Examples of such funding sources include NSF and other agencies which award on a competitive basis. The applicant should have a significant role in the research as PI or co-PI, and should be able to explain his/her contribution to the project.
- ◆ Be active in the consulting and/or professional arena. Such activities are considered scholarly when they are within the faculty's scholarly area and involve the creation, rather than the application, of knowledge and impacts significantly on one's discipline.
- ◆ Invited publications and presentations (including invited presentations at professional meetings and conferences or contributions to printed publications).
- ◆ As sole or co-author in the development of book materials, which have been contracted by a reputable publishing entity. For this form of authorship, the applicant needs to clearly state the contents of the individual contribution(s).

Disciplinary Standards for Tenure and Promotion to Associate Professor (The same standards apply to the two distinct processes of tenure or promotion)

Faculty members are expected to initiate and maintain an individual and original research program in an area of interest that adds to the diversity of research in the Mechanical Engineering Department. Integral to this program is the involvement of undergraduates as active participants who learn new skills and gain insight into current topics of research and development in the field.

Faculty are expected to maintain a pattern of continuing achievement since the initial appointment, with specific evidence of previous and continuing scholarly activity and professional endeavors.

The scholarly activity and professional endeavors should be evidenced by two refereed journal publications and one of the following -

- One additional publication in a refereed journal (published or accepted)
- Two (2) refereed Technical Conference Papers at the National or International level
- A funded, peer reviewed, competitive grant proposal of at least \$70,000, (and if Co-PI, the equivalent of \$70,000) - in response to a national call for proposals from a national government agency or regional/national private organization with published review criteria that supports the research of the faculty.

Evidence of growth and potential for a sustained scholarly effort must be established.

The faculty candidate is expected to be a leading and main contributor of the scholarly work. If Co-Author or Co-Pi, the candidate needs to clearly document his/her instrumental role and level of contributions to the activity. Collaborative scholarly work with secondary or less contributions can be used to evidence the continuing and sustained scholarly effort.

Disciplinary Standards for Promotion to Professor

The faculty candidate is expected to sustain a pattern of achievement since attaining the rank of Associate Professor, with evidence indicating the maturation of the scholarly and professional record. For promotion to the rank of Professor, the department expects a minimum of two peer-reviewed journal papers since promotion to the rank of Associate Professor. Additionally, the faculty candidate must show scholarship in any one of the following forms:

- a. Four refereed Technical Conference Papers at the National or International level.
- b. One peer reviewed journal publication (published or accepted), and two refereed Technical Conference Papers at the National or International level.
- c. Two refereed Technical Conference Papers at the National or International level, and a funded, peer reviewed, competitive grant proposal of at least \$100,000.
- d. One peer reviewed journal publication (published or accepted), and a funded, peer reviewed, competitive grant proposal of at least \$100,000.
- e. Two peer reviewed journal publications (published or accepted).

Regarding the scholarship itself, maturation may be demonstrated in a number of ways, including: completed scholarship that tackles notable challenges; high scholarly productivity; and successful grant activity. Scholarly maturation will also be evident through recognition of scholarly attainments by others in the field, for example as demonstrated by: publications in prestigious outlets; invitations to publish, present, review, or serve in an editorial capacity that reflect recognition of one's scholarly attainments by others in the field; prizes or awards for scholarly excellence; and frequent citations of work suggesting its value to the field.

In addition, expanded student involvement in a faculty member's scholarship is valued as an indicator of maturation, to the extent that this is attainable given the characteristics of the faculty member's scholarship and the prior level of student involvement. Expanded student involvement may be shown in a number of ways, including an increase in the number of students involved or number of semesters during which students are involved, greater sophistication of students' scholarly activities, or an increase in students' attainment of co-authorship on professional publications and presentations.

To measure the caliber, quality, and the productivity, the assessment criteria also applies to publications and/or grants "clearly and closely related/linked" to faculty's scholarly field(s). The faculty is expected to be a leading or main contributor of the scholarly work. If Co-Author or Co-PI, the candidate needs to clearly document his/her instrumental role and level of contributions to the activity. Collaborative scholarly work with secondary or less contributions can be used to evidence the continuing and sustained scholarly effort.