


Department of Biology  
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 in years 1-4. Candidates for promotion will use the disciplinary standards in effect in the year in which they apply for promotion.

  
\_\_\_\_\_  
Department Chair

9/28/12  
Date

  
\_\_\_\_\_  
Dean

9/28/12  
Date

  
\_\_\_\_\_  
Provost

10/15/12  
Date

The Department of Biology will next review its disciplinary standards in Academic Year 2015.



# Disciplinary Standards for Faculty Scholarship in the Biological Sciences

## Department of Biology

### September 2012

#### A) Introduction

This document has been drafted in response to the recommendation from the Committee on Faculty Affairs for departments to establish standards for scholarship within their disciplines, as outlined in the *TCNJ Promotions and Reappointment* Document of 2011. As teacher-scholars in the biological sciences, we embrace the opportunity to outline the standards in our fields that are appropriate for assessing the productivity of the faculty. To provide the institutional context for these standards, we begin with the excerpts from the mission of the College and School, and the Biology Program, which describe the role of teacher-scholar at The College of New Jersey (TCNJ). We then provide an extensive and comprehensive description of the scholarly expectations for the faculty in the Department of Biology.

#### A-1) The College of New Jersey Mission Statement

The faculty in the Department of Biology are committed to serving the mission of the College, and as such are committed to the model of the “teacher-scholar....dedicated to free inquiry and open exchange, to excellence in teaching, creativity, scholarship....” (TCNJ Mission Statement). Furthermore, we embrace the model presented in this mission statement whereby undergraduate students are integrated into this process, such that the experience we provide each student through our role as teacher/scholars “prepares students to excel in their chosen fields and to create, preserve and transmit knowledge.”

#### A-2) The School of Science Mission Statement

The application of the College’s mission statement to educational experience in the sciences is outlined in the School of Science Mission Statement, which states that “students will interact with outstanding teacher-scholars as instructors, advisors, and mentors” and they will do so because “faculty actively integrate undergraduate research experiences into their scholarship, helping prepare students to meet their future career or graduate school goals.”

#### A-3) The Department of Biology Mission Statement

The TCNJ Department of Biology promotes a culture of intellectual engagement centered on the life sciences, shared by a community of undergraduate students, faculty, staff, and alumni. The faculty members are teacher-scholars who are dedicated to excellence in teaching and are deeply engaged in the production of new knowledge. Utilizing modern pedagogy in the classroom and collaboration between students and faculty in research, we instill in all students a sense of scientific inquiry that employs a systematic and empirical approach to answering questions about the natural world, from molecules to organisms to ecosystems. We strive to challenge students and to foster critical thinking. By developing intellectual ability, technical knowledge, communication skills, and ethical standards for practicing modern science, we prepare students to excel in a diverse array of careers and to become informed and engaged citizens.

#### A-4) The Department of Biology Program Learning Goals

The Department of Biology has outlined eight Learning Goals for all students completing degree requirements in Biology. The second of these Learning Goals also informs the role of the teacher-scholar in the biological disciplines, for it states that “Students will understand that science is a set of data-based approaches to answering questions about how the natural world works, and that while scientists build on knowledge gained by their predecessors, they are engaged in creating new knowledge, not simply learning about what others have discovered. They will develop the ability to design, conduct, evaluate, and communicate a valid scientific study from hypothesis to conclusion, with adherence to professional ethics.” Therefore, engaging students in the process of creating new knowledge is a central role of the teacher-scholar in the biological sciences.

#### **B) Standards for Scholarly Productivity in the Biological Sciences at TCNJ**

The faculty of the Department of Biology embrace the model of a teacher-scholar who is a scientist engaged in creating new knowledge, defining new directions for biological inquiry, and communicating this knowledge to the broader scientific community. Therefore, TCNJ biologists conduct research, author scientific papers and textbooks, write grant proposals, and present their findings at professional meetings. We engage in this scholarly activity while also meeting the mission of the College to serve as mentors to students as they become apprentices in this process. This latter role by definition engages the faculty member as a teacher who also guides the research efforts of students in the laboratory and the field.

In support of the mission of the College, we also recognize scholarship that creates new knowledge in the area of the teaching of the biological sciences. While our role as scholars in the biological sciences is to advance our disciplines, TCNJ provides its faculty with the opportunity to advance knowledge in pedagogy as well, and therefore the productivity of a faculty member in discipline-related research may be complemented by productivity in pedagogical scholarship.

##### B-1) Collaborative and Interdisciplinary Scholarship

The generation of new scientific knowledge is generally not accomplished by single individuals, but is most often collaborative in nature. Scientific publications therefore, almost always have multiple authors and their individual contributions to the final product may vary considerably. Scientific collaborators may be other faculty members, post-doctoral fellows, graduate students, undergraduate students or technicians (from either TCNJ or other institutions). Scholarly collaboration of biologists with colleagues in other disciplines is also welcomed and will be evaluated equally and using the same standards as scholarship conducted solely within the discipline of biology.

##### B-2) Standards for Productivity

Based on combining the two goals of producing new knowledge in the sciences and educating undergraduates in the process of creating new knowledge, we support a model whereby the

record of a teacher-scholar in the biological sciences will be reflected by productivity as outlined in the categories below, and by mentoring undergraduates in laboratory and/or field research. Moreover, the range of sub-disciplinary fields in the biological sciences in which our faculty members engage each presents unique challenges and opportunities. For example, a field biologist's research may require long-term, multi-season/multi-year investigation, a geneticist's research may require comparative multi-organism, multi-gene analyses, and a cell biologist's research may necessitate consulting and testimony on the use of stem cells. This range of scholarly approaches, along with the natural integration of research with teaching, outreach, and service is valued by the Department. We acknowledge that the challenge to faculty, of becoming outstanding scholars in their scientific endeavors, is something that cannot be accomplished alone, but is a shared responsibility with the School of Science, the College, and the Department. Therefore the Department is committed to supporting and mentoring its faculty throughout their academic careers.

It is expected that the faculty member will have a record of publication in peer-reviewed journals as indicated in Category I (below). This publication record could be the sum total of a faculty member's productivity. Alternately, items from Category II (below) that are deemed equivalent to publications from Category I could substitute for additional items from Category I, as long as a publication record was in evidence. It is expected that the faculty member will engage undergraduates in their research. At a minimum this would be indicated by mentoring several students each year in Independent Research. Additionally, it is most valued when students present their research at disciplinary meetings, and co-author abstracts and/or scientific papers.

#### B-2a) Primary Evidence of Productivity

##### *Category I - Peer-reviewed Publications*

Peer-reviewed publications constitute the primary evidence of productivity that all scholars are expected to demonstrate. Appropriate areas of publication include the development of new knowledge and the application of knowledge in new ways in the biological sciences.

- Publications should primarily consist of refereed scholarly journal articles. In this regard, the candidate is encouraged to target appropriate peer-reviewed journals in their field as the predominant outlet for their scholarly work. The Department of Biology values all peer-reviewed publications, and encourages candidates to publish in journals with a wide general readership and/or those that serve an audience specific to their research areas.
- Publication of refereed, scholarly monographs, chapters in books/symposium volumes, review articles, articles in conference proceedings volumes, online reviewed publications, and the first editions of textbooks may also be considered in this category.

As noted above, the Department of Biology values collaboration with colleagues both within the College and at other institutions. Such collaborations can facilitate

rapid progress in research. Co-authorship is very common and is as highly regarded in science as single authorship. However, candidates who publish collaboratively should demonstrate that they have established an independent research program to be considered for reappointment, tenure, and promotion. Candidates with co-authored, collaborative papers should clearly indicate their contribution to these works. Works for which the candidate had the major intellectual contribution are most highly valued. Depending on the field, this may be indicated as first or last order of authorship.

### *Category II – Grants*

Candidates for reappointment, tenure, and promotion are encouraged to seek and obtain outside funding. This is especially important if it is necessary to support the level of productivity indicated in these guidelines. We recognize that the appropriate level of funding will be variable for different research programs. To be considered as primary evidence for scholarly productivity, grants must meet the criteria below. Less substantial grants are also valued, but fall within the criteria for supplemental evidence of productivity (Category III).

- Funded, peer-reviewed competitive grants that require extensive intellectual engagement and significant preliminary data and support the research of the faculty member for multiple years, meet the highest standard of productivity in this category.
- Competitive, peer-reviewed grant proposals as described above that were not funded but received positive reviews, and/or a request for resubmission are highly valued.

### B-2b) Supplemental Evidence of Productivity

#### *Category III – Other Scholarly Outcomes*

##### *Grants:*

- Funded grants that are either of short-duration (one year or less) or significantly less competitive and grants that solely support student research are also valued, but constitute supplemental evidence of productivity in this category.
- Smaller grant proposals that were not funded would be supplemental evidence of productivity in this category.

##### *Presentations:*

Regular presentation of research activity at scientific meetings appropriate to the candidate's research discipline is strongly encouraged. Such presentations represent critical supplemental evidence of sustained productivity. These activities may include:

- Invited presentations at symposia or meetings.
- Oral, platform, research presentations at scientific meetings.
- Acceptance of an abstract for presentation through a competitive process.
- Poster presentations.
- Contributed presentations with student co-presenters.
- Invited seminar presentations.

*Scholarship Integrated with Teaching or Service:*

Activities that integrate scholarship with either teaching or service may include (but are not limited to):

- Subsequent textbook editions.
- Textbook chapters.
- Published laboratory manuals.
- Government reports.

**C) Summary of Biology Scholarship Expectations for Reappointment, Tenure, and Promotion**

As indicated in the document *The Application Process for Reappointment and Tenure*, “Throughout the probationary period candidates should show steady progress toward a productive program of scholarship or creativity. By the time of the tenure decision there should be a record of finished work conducted while at TCNJ and clear promise of continued scholarship.”

C-1) For Pre-tenure Reappointment

During the first year there should be evidence that the faculty member has begun doing research at TCNJ, as shown minimally by setting up his/her lab, planning and/or conducting preliminary studies, and recruiting students into the research lab (which should continue throughout the probationary period). By the second year review there should be evidence of progress toward productive scholarship, as shown minimally by ongoing or concluded studies; planning for manuscript preparation, grant writing, and the next stage of research; and attendance at a scientific conference, ideally for presentation. During the third year there should be clear evidence of productivity as shown minimally by a submitted manuscript based at least in part on work done at TCNJ, or a significant grant proposal, and presentation at a scientific conference.

C-2) For Tenure

Having demonstrated the potential for establishing a productive research program during the previous reappointment, applicants for tenure must provide evidence that the program has progressed to the stage where the research serves as the basis for publication and, perhaps, potential grant support. The level of progress made as a researcher should clearly demonstrate: 1) that the applicant has been and will continue to conduct him/herself as a highly respected teacher-scholar and 2) the likelihood that the applicant will continue to grow as an ongoing scholar throughout his/her tenure at the College.

Given TCNJ's short tenure clock, the Department of Biology accepts for tenure evidence of scholarly output based on work performed entirely or in part while at TCNJ that includes all of the following:

- At least one peer-reviewed publication from Category I.  
[While peer-reviewed publication is most valued, under unusual circumstances it is possible that a candidate may substitute a funded, peer-reviewed competitive grant that supports research for multiple years (Category II) that is deemed equivalent in intellectual scope, content and competitiveness to a peer-reviewed publication]
- At least one of the following:
  - An additional peer-reviewed publication from Category I
  - A peer-reviewed competitive grant that supports the research of the faculty member for multiple years (from Category II) that has been funded
  - A peer-reviewed competitive grant proposal (from Category II) that has been submitted and has received positive reviews whether funded or not
  - An unpublished paper that has been submitted and well-reviewed and is currently under review as a re-submission.
- Supplemental evidence from Category III (e.g., small grants, regular presentations at scholarly meetings appropriate to the candidate's discipline).
- Indication of continual, active, and well-mentored involvement of undergraduates in research.

In those cases where the candidate has already attained a high enough level of productivity and accomplishment so that he or she is initially appointed at the rank of Associate Professor or Professor, he or she will need to provide evidence of the establishment of a viable research program and continued productivity at the College in order to be considered for tenure.

### C-3) For Promotion to Associate Professor

As indicated in the Promotion Document, "Promotion to Associate Professor requires a pattern of continuing achievement since initial appointment." Continuing achievement will be indicated by all of the following:

- Clear articulation of an independent research program going forward, with finite goals for the next five years.
- Demonstrated evidence of continued scholarly productivity beyond the minimum expectations for tenure, such as:
  - An additional peer-reviewed publication from Category I and/or
  - A funded, or non-funded but well reviewed, grant from Category II.
- Continued evidence of supplementary activity from Category III.
- Continued well-mentored involvement of undergraduates in research.

### C-4) For Promotion to Professor

The Promotion document states that "Promotion to Professor requires a sustained pattern of scholarly activity since attaining the rank of Associate Professor, with evidence indicating the maturation of the scholarly/creative/professional record." For the Department of Biology,



sustained scholarly activity will be reflected by all of the following since the promotion to Associate Professor:

- Consistent production of additional peer-reviewed journal publications (Category I), recognizing that the rate of publication may vary depending on the nature of the scholarly work and sub-disciplinary field. The candidate should describe specifically how their research program has matured and their record of publication is at an appropriate sustained level for their type of research.
- Grants (Category II) or sustained supplemental scholarly activities (Category III) with some at a higher level (e.g., presenting invited talks at conferences or obtaining significant peer-reviewed grant funding).
- Consistent involvement of undergraduates in research.

These standards may be somewhat relaxed under circumstances when, as stated in the *TCNJ Promotions and Reappointment* document, “there may be periods when the level of scholarly activity is somewhat reduced (but not eliminated) due to a significant increase in teaching or service, such as serving as Department Chair.”

