

# SCHOOL OF PHYSICS AND ASTRONOMY

## 7.12 Criteria for promotion and tenure

### I. Introduction

This document describes with more specificity the indices and standards that will be used to evaluate whether candidates meet the general criteria in Sections 7.11 and 9.2 of the Regents Policy on *Faculty Tenure* for the following personnel evaluations:

- A. Annual performance appraisal of progress toward achieving tenure.
- B. Recommendation for awarding indefinite tenure according to *Faculty Tenure* (University of Minnesota, 2007; hereafter cited as *Faculty Tenure*), Section 7.11. General Criteria.
- C. Recommendation for promotion to Associate Professor and Full Professor according to the Regents Policy on *Faculty Tenure*, Section 9.2 Criteria for Promotion to Professor.
- D. Annual performance appraisal for post tenure review according to Section 7a.1 and 7a.2 of *Faculty Tenure*.

In addition, this document is consistent with the *Procedures for Reviewing Candidates for Tenure and/or Promotion: Tenure-Track and Tenured Faculty* (2007), hereafter referred to as the *Procedures*.

### II. Mission Statement

The mission of the School of Physics and Astronomy comprises four objectives: the education of students and professionals at all levels through a dedication to effective teaching; the pursuit and dissemination of new scientific and technical knowledge through original and creative research; the application of this knowledge and scientific expertise through service to various sectors of society, and the support of K-12 and public education in the physical sciences through outreach and other programs.

### III. Annual Appraisals of Probationary Faculty

Probationary faculty will be reviewed annually and progress will be evaluated according to Section 7.11 in *Faculty Tenure*, the *Procedures*, and the criteria described here (Section IV).

Mentoring is an important component in the promotion and tenure process. The Head of the School will assign a two- or three-person committee for each probationary faculty

member. The members will be selected from among the senior faculty in the School. In the case of Astronomy faculty, this will be done in consultation with the Chair of Astronomy.

While it is the mentoring committee's responsibility to provide guidance on teaching, research and service, the decision to follow this advice rests entirely with the probationary faculty member. Peer reviewers of teaching, who may be different from the mentors, are expected to provide feedback that can be used to improve teaching.

The Head of the School, in the case of physicists, and the Astronomy Chair, in the case of astronomers, will be responsible for soliciting an annual report for submission to the School's Promotion and Tenure Committee, from each probationary faculty member on his/her teaching, research, and service activities plus any additional information he/she deems necessary for the review according to this 7.12 statement. For probationary faculty with a strong interdisciplinary component in their research, input will be solicited from senior faculty in relevant units. The School's Promotion and Tenure Committee will prepare a written report to the tenured faculty of the School who will then vote on continuing the appointment. It will be the responsibility of the Head of the School in case of physicists, and the Astronomy Chair, in the case of astronomers, to review the Committee's report and the faculty's recommendation with the probationary faculty member. This will be the basis for the annual Form 12 for the review of probationary faculty. For faculty with joint appointments with another department the process will involve a parallel evaluation by the School and the other department.

Tenure decisions may be made in any year of the probationary period, as described in Section 5.2 of Faculty Tenure and Section 9 of the *Procedures*. A candidate must be considered in a formal tenure review in the last year of the probationary period.

In accordance with Section 5.5 of Faculty Tenure the probationary period may be extended by one year at a time at the request of the faculty member for childbirth/adoption, caregiver responsibilities, or medical reasons. The criteria for evaluation of faculty who have had their probationary period extended are no different than the criteria for faculty who do not have an extension of the probationary period. Extension of the probationary period in accordance with Section 5.5 may not be a factor in the evaluation.

The department may recommend termination of a candidate's appointment at any time in accordance with Section 10 of the *Procedures*.

#### **IV. Conferral of Indefinite Tenure**

**7.11 General Criteria.** What the University of Minnesota seeks above all in its faculty members is intellectual distinction and academic integrity. The basis for awarding indefinite tenure to the candidates possessing these qualities is the determination that each has established and is likely to continue to develop a distinguished record of academic achievement that is the foundation for a national or international reputation or

both [3] This determination is reached through a qualitative evaluation of the candidate's record of scholarly research or other creative work, teaching, and service [4]. The relative importance of these criteria may vary in different academic units, but each of the criteria must be considered in every decision [5]. Demonstrated scholarly or other creative achievement and teaching effectiveness must be given primary emphasis; service alone cannot qualify the candidate for tenure. Interdisciplinary work, public engagement, international activities and initiatives, attention to questions of diversity, technology transfer, and other special kinds of professional activity by the candidate should be considered when applicable. The awarding of indefinite tenure presupposes that the candidate's record shows strong promise of his or her achieving promotion to professor.

[3] "Academic achievement" includes teaching as well as scholarly research and other creative work. The definition and relative weight of the factors may vary with the mission of the individual campus.

[4] The persons responsible and the process for making this determination are described in subsections 7.3 through 7.6.

"Scholarly research" must include significant publications and, as appropriate, the development and dissemination by other means of new knowledge, technology, or scientific procedures resulting in innovative products, practices, and ideas of significance and value to society.

"Other creative work" refers to all forms of creative production across a wide range of disciplines, including, but not limited to, visual and performing arts, design, architecture of structures and environments, writing, media, and other modes of expression.

"Teaching" is not limited to classroom instruction. It includes extension and outreach education, and other forms of communicating knowledge to both registered University students and persons in the extended community, as well as supervising, mentoring, and advising students.

"Service" may be professional or institutional. Professional service, based on one's academic expertise, is that provided to the profession, to the University, or to the local, state, national, or international community. Institutional service may be administrative, committee, and related contributions to one's department or college, or the University. All faculty members are expected to engage in service activities, but only modest institutional service should be expected of probationary faculty.

[5] Indefinite tenure may be granted at any time the candidate has satisfied the requirements. A probationary appointment must be terminated when the appointee fails to satisfy the criteria in the last year of probationary service and may be terminated earlier if the appointee is not making satisfactory progress within that period toward meeting the criteria.

To be awarded indefinite tenure in the School of Physics and Astronomy a faculty member must demonstrate effectiveness in teaching and must establish a record of excellence and creativity in scholarly research and its dissemination. These are the primary criteria, and the fulfillment of both is a minimum requirement for the awarding of indefinite tenure. Extraordinary distinction in teaching alone, or in research alone, is not sufficient for the granting of indefinite tenure.

A faculty member may choose to participate in service to the profession and in other governance and service activities. These contributions, however, are secondary to the teaching and research components in evaluations leading to decisions related to the granting of tenure. An outstanding record in the service component alone is not, by itself, sufficient to form the basis for a recommendation to indefinite tenure.

The use of any factor other than teaching, research and service in making the decision about a probationary faculty member must be specifically stated and justified at the time of the decision. When considering the record of probationary faculty who have stopped the tenure clock (Section 5.5 of *Faculty Tenure*), the criteria for promotion and tenure are no different than the criteria for faculty who do not have an extension of the probationary period. Extension of the probationary period in accordance with Section 5.5 may not be a factor in the tenure decision. That is, a record of six years post-hiring with a one-year stopping of the clock must be considered the same way that one considers five years post-hiring with no stopping of the tenure clock.

## **A. Teaching**

Effectiveness in teaching is assessed from the candidate's contributions to the overall teaching mission of the university including, where appropriate, classroom, laboratory and individualized instruction at both undergraduate and graduate levels, the supervising of graduate students, and the advising of postdoctoral personnel.

Examples of factors which may be used in the evaluation of effectiveness in teaching at the undergraduate level include, but are not limited to, the following:

- written evaluations by peers based on classroom visits and review of course materials and student work; interdisciplinary classes will also be evaluated by representatives from the other fields;
- written evaluations by students; where quantitative course evaluations are used, performance is expected to be in the satisfactory range. Teaching in the School of Physics and Astronomy teaching includes formal classroom and laboratory instruction as well as individualized instruction. Student evaluations from different types of formal classroom and laboratory classes can show considerable variation. Therefore, department norms for these classes will also be used for comparison;
- development of new courses and/or laboratories;
- supervision of undergraduate research projects;
- advising of undergraduate and professional student organizations;
- development of instructional materials;
- publication of textbooks;
- local and national awards for teaching;
- participation in teaching improvement programs and an upward trajectory in student evaluations.

At the graduate level, the primary consideration in establishing teaching effectiveness is expertise in the teaching of advanced courses, in the conducting of graduate seminars, and in the supervising of graduate students at the masters and doctoral levels, including peer evaluation of the progress of the candidate's advisees. Other factors that may be taken into consideration at the graduate level are:

- written evaluations by peers based upon classroom and/or seminar visits;
- written evaluations by students;
- development of new courses and/or laboratories;
- supervision of postdoctoral personnel and other post-baccalaureate programs and students.

## B. Research

The quality of a candidate's original research and the impact of the work within the candidate's professional discipline are the primary criteria by which professional distinction in research is established. Examples of factors upon which an analysis of the research accomplishments of the candidate may be based include, but are not limited to, the following:

- written evaluations of the candidate's research activities and of the candidate's publications in peer reviewed research journals and research monographs. These evaluations are requested from persons who are generally recognized as leaders in the candidate's research area. Effort should be made to obtain at least 8 letters of evaluation. The reviewers may include persons within the University but must include at least 6 evaluations from outside the University, some of whom should be of international stature. The candidate will be asked to suggest the names of reviewers to the Head of the School in consultation with the promotion and tenure committee and with knowledgeable senior faculty. In the case of astronomy faculty, the chair of Astronomy will be consulted. The *Procedures* indicate that: the School should seek appraisals both from persons suggested by the candidate and from other recognized scholars in the field. About half of the suggested reviewers should come from the candidate and half from the department. At least half and no fewer than four, of the external reviews must be obtained from individuals with no direct professional or personal interest in the advancement of the candidate's career (for example, they should not be former advisors, mentors, co-authors, or co-investigators on previous work).
- if the candidate has a strong interdisciplinary component in his or her research, the Department will obtain letters of evaluation from faculty in the relevant unit(s) and from external reviewers whose research also crosses similar interdisciplinary boundaries;
- Collaborative research will be evaluated by obtaining information from the candidate on his/her relative contribution to the work and from senior members of the research group or senior authors on the publication;
- written evaluations of the candidate's publications in the form of abstracts, conference preprints, conference proceedings, and other professional publications. These evaluations are an integral part of the documentation upon which the decision on the quality of the candidate's research is based, but they do not form the primary basis for that decision;
- participation in professional conferences, symposia, meetings, and special lectures, especially those for which participation was by invitation;
- External research funding from sources outside the University, is desirable in as much as this is a measure of the research skill and competence of the candidate. In evaluating the candidate's research contributions through the various avenues of publication and presentation, the objectives are to establish that the work is of high quality, that it is a scholarly and creative contribution to the candidate's professional discipline, and that it is a measure of the candidate's potential to make continuing contributions to his field.

Other qualifications that the candidate may have acquired, and that may be used to establish the candidate's research ability include, but are not limited to, the following examples:

- election to prestigious national organizations that recognize excellence in a discipline;
- research awards and honors granted by professional societies, government agencies, and industry;
- patents, inventions, technology transfer, and other such developments of a significant scientific or engineering nature;
- publication of scholarly review articles and research monographs;

### **C. Service**

Service to the profession is an integral component of a faculty member's professional obligations. It enhances the faculty member's professional reputation, and it brings recognition to the department and the University. By itself, however, service to the profession is not a sufficient basis for the granting of tenure in the School of Physics and Astronomy.

Examples of service contributions to the profession include, but are not limited to:

- editor or associate editor of a refereed scientific or technical journal;
- officer in a national or international scientific or technical society;
- member of a national or international scientific or technical committee;
- member of a governmental or private advisory committee;
- organizer or member of the organizing committee for a national or international symposium or conference;
- review of technical and scientific papers for peer-reviewed journals and conference presentations;
- review of proposals for funding agencies and other entities involved in research;
- participation in public outreach and education.

Participation in the governance of the institution and other services to the University and the **School of Physics and Astronomy** is expected for faculty and may be included as additional support for a tenure recommendation. Examples of such services include, but are not limited to, active participation in departmental, collegiate, and University committees. Participation in public outreach events and public education is encouraged and valued, and is considered important for the continued public support of the science and profession, but is not a criterion for tenure.

## **V. Promotion**

The following paragraphs describe the criteria for promotion to tenured ranks from within the Institute of Technology. The same criteria and standards are applied for appointments from outside.

### **A. To associate professor (with tenure) from assistant professor (probationary)**

Promotion to the rank of associate professor from the rank of probationary assistant professor in the School of Physics and Astronomy is always accompanied by the granting of permanent tenure. Thus a candidate for promotion to associate professor must have established a professional record that meets the requirements for effectiveness in teaching and professional distinction in research as set forth in Section IV. Service contributions are also included in the evaluation of the candidate, but cannot be used in place of either the teaching or the research criteria.

### **B. To associate professor (with tenure) from associate professor (probationary)**

The granting of indefinite tenure to an associate professor hired on a probationary appointment requires that the candidate meet all the requirements for effectiveness in teaching and professional distinction in research as set forth in Section IV.

### **C. To professor from associate professor**

Section 9.2 of Faculty Tenure specifies the criteria for promotion to full professor:

**9.2 Criteria for Promotion to Professor.** The basis for promotion to the rank of professor is the determination that each candidate has (1) demonstrated the intellectual distinction and academic integrity expected of all faculty members, (2) added substantially to an already distinguished record of academic achievement, and (3) established the national or international reputation (or both) ordinarily resulting from such distinction and achievement [8]. This determination is reached through a qualitative evaluation of the candidate's record of scholarly research or other creative work, teaching, and service [9]. The relative importance of these criteria may vary in different academic units, but each of the criteria must be considered in every decision. Interdisciplinary work, public engagement, international activities and initiatives, attention to questions of diversity, technology transfer, and other special kinds of professional activity by the candidate should be considered when applicable. But the primary emphasis must be on demonstrated scholarly or other creative achievement and on teaching effectiveness, and service alone cannot qualify the candidate for promotion.

[8] "Academic achievement" includes teaching as well as scholarly research and other creative work. The definition and relative weight of the factors may vary with the mission

of the individual campus. Not being promoted to the rank of professor will not in itself result in special post-tenure review of a tenured associate professor.

[9] The persons responsible for this determination are the full professors in the unit who are eligible to vote. The outcome of the vote is either promotion to the rank of professor or continuation in rank as an associate professor. The procedures for voting are identical to those outlined in Section 7.4 for the granting of indefinite tenure, the nondisclosure of grounds for the decision (Section 7.5), and the review of recommendations (Section 7.6). In addition, a petition to the Judicial Committee for review of a recommendation of continuation in rank as an associate professor follows the procedures specified in Section 7.7 for decisions about promotion to associate professor and conferral of indefinite tenure.

In the School of Physics and Astronomy, candidates for promotion to full professor are expected to have a record of accomplishment that exceeds that achieved for promotion to associate professor and to have established a national and international reputation. All associate professors are expected to work to achieve promotion to full professor. It is the responsibility of the Head of the School, in the case of physics professors and the Chair of the Astronomy Department, in the case of astronomy faculty, to advise the associate professors on their progress as part of the annual departmental performance review process.

A candidate for promotion to the rank of professor must have achieved a high level of professional distinction through research contributions to the candidate's discipline that are distinguished by substance, quality and creativity, and through consistently high standards in teaching. Service to the profession, participation in the governance of the institution, and other services to the department, college, and University, is expected for candidates for promotion to professor, but they are not in themselves basis for promotion to the rank of professor. Promotion to the rank of professor will not be granted solely on the basis of length of service to the academic unit.

For promotion to professor, the candidate is expected to satisfy the criteria specified in Section IV, with emphasis on:

- high quality research which indicates that the candidate is among the leaders in the field, as documented by letters from acknowledged national and international leaders and contributors to the knowledge base in the field;
- demonstrated effective teaching;
- a record of effective advising of masters and doctoral degree candidates;
- the effective advising of post-doctoral personnel in disciplines where this is appropriate.

Examples of other factors that may be used to establish a candidate's professional reputation include, but are not limited to, the following:

- invitations to national and international symposia and conferences;

- membership and the holding of office in professional societies;
- general professional contributions such as editorships, expository writing, and other activities that enhance the professional stature of the candidate.

The methods of assessment of the performance of a candidate being considered for promotion to the rank of professor are the same as those employed in the granting of tenure as described in Section III, except that the vote on the recommendation of the School's Promotion and Tenure Committee shall be taken only by the full professors.

## **VI. Post Tenure Review of Faculty Performance**

The goals and expectations for tenured faculty will parallel those used in the granting of tenure taking into account the different stages of professional development and will provide for flexibility. Tenured faculty in the School of Physics and Astronomy are expected to maintain an active research program, teach courses as required by the School, and in a satisfactory manner, advise students, and serve the goals of the School and the college. They are also expected to support their research activities as necessary and to publish and present their research results when appropriate. According to Section 7a of *Faculty Tenure* all faculty are reviewed annually as part of the annual merit review process in accordance with Senate policy. The School of Physics and Astronomy will have a Post Tenure Review Committee of five full professors elected by the faculty. If, during the course of the annual review process, both the Head of the School, in case of physicists, and the Astronomy Chair, in the case of astronomers, and the elected Post Tenure Review Committee find a faculty member's performance to be substantially below the goals and expectations of the School for more than five years, they must send a letter or memorandum to the faculty member stating that finding. The letter must be signed both by the Department Head (or Chair of Astronomy) and by all members of the Committee, must specify the deficiencies, and must set a time period of at least one year, during which the faculty member should address the identified problems. Both the Head or Chair of Astronomy, and the Committee should work with the faculty member to improve performance during that time. Efforts must be made at this point in the process to assist the faculty member in remedying perceived deficiencies.

If the faculty member's performance continues to be below expectations then the procedures described in 7a.3 of *Faculty Tenure* will be followed.

## **VII. Procedures**

The departments of the Institute of Technology comply with the procedures as provided by Sections 7.4, 7.61 and 76.3 of *Faculty Tenure*.

### **A. Procedures for Annual Review of Probationary Faculty.**

The School of Physics and Astronomy will have a five-member Promotion and Tenure Committee which participates in the annual reviews of probationary faculty. One member of this committee should be a Professor of Astronomy. This committee will also screen all potential new hires in the School.

### **B. Procedures for Tenure and/or Promotion Review.**

During the decision year, if not before, the Head of the School in consultation with the Chair of the Astronomy Department in the case of astronomy faculty, with advice of the Committee and senior faculty, shall solicit letters of recommendation for promotion and tenure. The committee will be responsible for reviewing the letters. The candidate working with his or her mentoring committee together with staff will be responsible for

assembling the dossier in accordance with the guidelines provided by the Institute of Technology. Based on their review of the dossier and the letters of recommendation, the Promotion and Tenure Committee will make its recommendations for tenure decisions to a meeting of the tenured faculty in the School. All tenured faculty are expected to have reviewed the candidate's file prior to the meeting and participate in the vote. After discussion the faculty will vote. Eligible faculty who cannot attend the meeting can cast absentee ballots provided they have read the file, and only after reading the minutes of the meeting. A two thirds majority of those voting is required for a positive decision. The same procedures and voting standard will apply to decisions for promotion to full professor where all of the full professors are expected to review the file and to participate in the vote.

After this process, the dossier, together with an account of the faculty action, shall be submitted to the college, with a covering letter from the Head of the School and in the case of Astronomy faculty, a letter from the Department Chair.

Approved by the faculty of the School of Physics and Astronomy - May 12, 2008

Approved by the Senior Vice President for Academic Affairs and Provost - July 20, 2008