

Departmental Standards for ladder-rank faculty — July 30, 2018

Research:

Physics is such a broad and varied field that it is impossible to have any single measure or formula that can be applied fairly to all faculty in all subfields. The Department therefore takes a holistic approach to assessing faculty work. Quality, productivity, and impact are all critical factors. A single, simple metric is ineffective in evaluating research and research “productivity”. One must differentiate expectations by field or area, and by whether the candidate is an experimentalist or a theorist. Physicists and astronomers in areas where large collaborations are the norm often produce a large number of papers during a single review period; in such cases it is imperative to distinguish those publications in which the candidate made a significant contribution. Other physicists and astronomers, in contrast, tend to work alone or with a small number of collaborators, and it is not unusual for them to publish only a handful of papers during any given review period. Publication style also varies even across physicists in the same discipline, some publishing long treatises while others producing more short papers instead. Publication quality and impact is assessed on the basis of publication venue and their impact factors, number of citations, the opinions that knowledgeable internal and external referees have of the work, invitations to speak about the work, other forms of external recognition of the work, *e.g.*, selection as an Editor’s choice in a leading journal, and other measures of the influence of the work on the faculty member’s field of research.

Prior to their tenure evaluation, Assistant Professors are judged largely on their progress towards establishing an independent, active, innovative and productive research program, with the expectation that their work will be published in appropriate journals.

Teaching

All faculty are expected to maintain a standard teaching load established by the Department and are expected to strive for excellence in their teaching. Teaching effectiveness is measured by a combination of evaluations by a committee of their peers, evaluation of course materials submitted in the file and by judicious interpretation of the student evaluation of instruction. For the latter, particular attention is paid to the written comments; quantitative effectiveness is not measured by overall instructor recommendation to peers ratings, but rather by several factors that contribute to effective teaching and lifelong learning, such as ratings for high proficiency of the material presented, preparedness for class, ability to explain the course material well and concern for student learning.

Service

Faculty are expected to participate in the governance of the Department, Division, and/or University through committee or other administrative work. Most Department of Physics faculty also participate in service outside UC San Diego in a variety of ways. The service expectations of faculty rise as they advance in rank and step: while Assistant professors are expected to serve in no more than one committee per year, Distinguished

Professors are expected to devote significant more time to service to the university and the profession. In evaluating service contributions, it is important to consider time committed and impact, understanding that time demands vary significantly from one committee to the next, and by the role played in the committee. Participation in faculty meetings and attendance to department functions, including the weekly colloquium are important contributions to the department.

UC San Diego is committed to excellence and equity in every facet of its mission. Teaching, research, professional and public service contributions that promote diversity and equal opportunity are encouraged and given recognition in the evaluation of the candidate's qualifications. These contributions to diversity and equal opportunity can take a variety of forms including efforts to advance equitable access to education, public service that addresses the needs of California's diverse population, or research in a scholar's area of expertise that highlights inequalities. Mentoring and advising of students and faculty members, particularly from underrepresented and underserved populations, should be given due recognition in the teaching or service categories of the academic review process.

Teaching Faculty Standards in the Department of Physics

Teaching excellence:

All teaching faculty are expected to maintain a standard teaching load established by the Department and are expected to demonstrate excellence in their teaching. Teaching effectiveness is measured by a combination of evaluations by a committee of their peers, evaluation of course materials submitted in the file and by judicious interpretation of the student evaluation of instruction. For the latter, particular attention is paid to the written comments; quantitative effectiveness is not measured by overall instructor recommendation to peers ratings, but rather by several factors that contribute to effective teaching and lifelong learning, such as ratings for high proficiency of the material presented, preparedness for class, ability to explain the course material well and concern for student learning.

Professional and/or scholarly achievement and activity:

We look for evidence of achievement, leadership, and/or influence on the campus or beyond of professional and/or scholarly activities. For teaching faculty these are likely to focus on the departmental mission of further improvement of students' educational experience, going beyond the standard teaching effort expected from all faculty. These activities are generally expected to involve the development and the implementation of novel creative teaching techniques and approaches, research into student learning and achievement, curriculum development, as well as knowledge and skill transfer of such approaches to other instructors and teaching assistants within the Physics department and beyond.

Administrative work (e.g., of learning centers and teaching programs) and community outreach work are also relevant, as are presentations of seminars or lectures at other institutions or professional societies, or participation in scholarly activities (e.g., summer seminars) designed to enhance scholarly expertise in Physics or Astronomy. Relevant evidence can be found also in other records of participation in intensive programs of study — in order to be a more effective teacher and scholar, with the goal of enhancing one's teaching and scholarly responsibilities. Non-exclusive examples of evidence include any documentation of the development of or contributions to:

- (i) Original materials designed to improve learning outcomes;
- (ii) Evidence-based design and evaluation of educational curricula or pedagogy;
- (iii) Administration and evaluation of a teaching program or a learning center;
- (iv) Systematic quality improvement programs and evaluation of their implementation;
- (v) Physics or Astronomy information systems;
- (vi) Development and evaluation of community outreach or community-oriented programs.
- (vii) Discipline based scholarship in relation to, or relevant to, Physics and/or Astronomy.
- (viii) Keeping abreast of current pedagogical developments in the field.

- (ix) Participation at, and contributions to, academic conferences, where sessions on pedagogical research and techniques are prominent.
- (x) Professional work that allows them to maintain a mastery of their subject area, provided that such professional work enhances directly the teaching mission of the Department of Physics.
- (xi) Participation in professional development activities such as workshops, courses or seminars on teaching and learning that furthers their expertise in a particular pedagogical area and allows them to refine and enhance their teaching practices.
- (xii) Responding to feedback (from students, colleagues and/or mentors) on their teaching through the development of pedagogical/professional goals.
- (xiii) Ongoing pursuit of further academic qualifications relevant to their position.

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