

Astronomy Department Guidelines for Annual Faculty Reviews

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1. Introduction

The annual evaluation of faculty is required by Regents' Rules 30501, 31102, and Handbook of Operating Procedures 2---2150, all of which establish that the overriding purpose for faculty evaluation is to support tenure and promote faculty development.

The procedures for faculty annual reviews is provided on the College of Natural Sciences (CNS) Dean of Faculty Affairs web page (Reference 1) and the Provost's office policies webpage (Reference 2). The guidelines in this document complement the CNS and University guidelines for annual faculty reviews and apply specifically to the Astronomy Department.

2. Election and Role of the Faculty Evaluation Committee

The faculty Evaluation Committee shall consist of five members elected from the tenured members of the voting faculty and elected by all members of the voting faculty. The term of office of each member shall be two academic years, to begin at the start of the Fall Semester. At the last regularly scheduled Faculty meeting of each academic year, the Faculty shall elect two (or three in alternate years) members by secret ballot. The member of the Committee whose term expires each year may not be re-elected until one full year has elapsed. The Evaluation Committee will elect its own Chair.

The Evaluation Committee will provide the annual performance reviews and the category ratings to the Chair. As per CNS guidelines (Reference 1), the ratings are to be communicated to the Chair and Dean, and either or both may further review the materials and make a separate recommendation. Note that the Chair does not make any recommendations for his/her spouse.

The committee will also recommend merit raises for all faculty members, except those who report directly to the Dean (e.g. the department Chair and the McDonald Observatory Director). Because the Astronomy Department operates under an Extended Budget Council form of governance, recommendations on merit raises are based on votes of all tenured professors. To inform those votes, the Chair will make available to the Extended Budget Council the merit raises recommended by the Evaluation Committee. The Chair will make a separate set of recommendations, to the Dean based on those of the Extended Budget Council, but does not make any recommendations for his/her spouse. The Dean will make final recommendations for merit raises after taking into account the Chair's recommendations and other factors, such as retention and promotion.

The Evaluation Committee will also provide other relevant reviews (e.g., Comprehensive Post-Tenure Reviews or CPRs) and provide advice to the Department Chair on workloads, Third Year Reviews (TYR), promotions, prizes, faculty leaves, Chair's Fellowships, and any similar matters identified by the Chair.

3. Materials for Review

CNS guidelines (Reference 1) specify that the materials for the year under review to be assessed include the following:

- 1) Annual Faculty Activity Report (FAR)

- 2) Current curriculum vita
- 3) Student evaluations of teaching, including all written student comments
- 4) Additional materials as available, such as:
 - a) Peer teaching observations (peer review should be annual for assistant professors, since those evaluations will be needed for promotion and tenure. It is not essential to have annual peer reviews of more senior faculty, but these should be done periodically.)
 - b) Any documentation directly relevant to the record of teaching, scholarship, or service
 - c) Information submitted by the faculty member

It is the responsibility of individual faculty members to provide items (2), (3) and (4c) to the Chair's office for passing on to the Evaluation Committee. The curriculum vita should include the publications of the faculty member. Under item (4c), astronomy faculty members are encouraged to submit a short summary statement (3 pages maximum), which gives information on their specific goals and styles of research, teaching, and service, as well as other information they deem relevant.

For item (1), the Chair's office will provide the Evaluation Committee with the FARs of faculty members who have submitted their FARs to the Provost online system. External grant funding information will come from the FARs

For item 4a), the Chair's office will provide the Evaluation Committee with peer teaching observations, when available.

For item 4b), the Chair's office will provide the Evaluation Committee with department-wide information on CIS scores over the last three years and a summary table of departmental mean CIS scores and associated standard deviations.

When possible, the Chair's office will provide publication metrics (see section 4.3(I)) to the Evaluation Committee in order to complement the publication information in the curriculum vita.

4. Evaluation Process

4.1 Evaluation Categories

University and CNS policy (References 1, 2) require that each faculty member reviewed shall be placed in one of the four categories defined below:

- *Exceeds expectations* – a clear and significant level of accomplishment beyond what is normal for the institution, discipline, or unit
- *Meets expectations* – normally expected level of accomplishment
- *Does not meet expectations* – a failure beyond what can be considered the normal range of year-to-year variation in performance, but of a character that appears to be subject to correction.
- *Unsatisfactory* – failing to meet expectations in a way that reflects disregard of previous advice or other efforts to provide correction or assistance, or involves prima facie professional misconduct, dereliction of duty, or incompetence

The rating assigned shall be an aggregate based on overall judgment of the faculty member's activities.

4.2 Guiding Principles For Faculty Reviews

1. The mission of the Astronomy Department and McDonald Observatory is to advance the frontier of human knowledge and share it with future generations. As stated in our strategic vision plan (Aug 2015), our goal is to bolster the standing of the Astronomy Department and McDonald Observatory as one of the best astronomy programs in the nation, while promoting a culture that values scientific excellence, innovation, diversity, and collegiality. Our evaluation process must align with our vision plan, and must be informed by our values of excellence, innovation, ethical behavior, diversity, and collegiality.
2. We adopt an overriding principle that is modeled on the "Hippocratic oath:" first, do no harm. Any evaluation process is inevitably regarded as somewhat threatening; our first aim should be to do the necessary job while preserving as healthy a creative environment in the department as possible.
3. Given the diversity in research, teaching, and service styles, our evaluation process must take into account the goals and methods of individuals. Both quantitative and qualitative evaluations are important and no single criterion captures excellence. The Evaluation committee will use multiple quantitative criteria, along with evaluations of quality (section 4.3).
4. In line with our mission of promoting excellence, diversity, and inclusion, the Evaluation Committee will follow best practices to avoid bias against gender, race, and ethnicity. Best practices to avoid bias (Reference 3) require that we *clearly spell out the criteria used for evaluation and that we follow an evaluation procedure that includes training against unconscious bias, as well as a system of checks and balances*. We therefore make the evaluation criteria explicit in section 4.3, and set up a balanced evaluation procedure in section 4.4.
5. The primary criterion for research-active faculty as a whole is excellence in research, with teaching, service, and outreach as important criteria. Faculty members who contribute less in one area are expected to contribute more in other areas. Consistent with CNS policy, faculty without active research programs will be expected to carry an increased teaching load.
6. CNS and UT guidelines (References 1, 2) indicate that the four ratings in section 4.1 ("Exceeds expectations", "Meets expectations", "Does not meet expectations", or "Unsatisfactory") should be based on what is normal for "the institution, discipline, or unit". The Dean's office also gives each department the freedom to set a baseline commensurate with this principle. *Since the Astronomy department is one of the top astronomy departments in the nation, we hold ourselves to high standards and we choose our normal baseline to align with the standards of top peer astronomy departments in the country.* With this adopted baseline,
 - a) We expect the vast majority of our faculty have a rating of "Meets expectations".
 - b) We adopt a conservative use of the rating "Exceeds expectations" to honor and recognize a clear and significant level of accomplishment beyond what is normal. Accordingly, we set an upper limit of 30% of the faculty to have a rating of "Exceeds expectations"; in a typical year, we expect this rating to be even rarer.
 - c) We will only assign the ratings of "Does not meet expectations" and "Unsatisfactory" after very careful considerations of faculty contributions to research, teaching, service and outreach in the last three years, *and* if at least four of the five members of the Evaluation Committee agree to do so.

4.3 Criteria for Evaluation

The guiding principles in section 4.1 will inform the evaluation of faculty in the areas of research, teaching, service, and outreach. In particular, we reiterate that given the diversity in research, teaching, and service styles, our evaluation process must take into account the goals and methods of individuals. The Evaluation Committee will use both quantitative and qualitative evaluation as no single criterion captures excellence. For each area of research, teaching, service, and outreach, we outline below the criteria that will be considered.

I. Research

The Evaluation Committee takes a broad view of what should count as research.

At the very least, research includes:

- Contributing to publications that report original research.
- Writing comprehensive books and reviews.
- Training graduate students to do research and working with them on their research.
- Applying for and securing grant funding that enables research by oneself and others, particularly graduate students
- Writing computer programs that contribute to research by oneself and others.
- Designing and building instruments
- Conducting long-term large surveys that contribute to research by oneself and others.

When evaluating the research contributions of faculty, the Evaluation committee will consider the research goals and methods of each individual, and use a holistic set of quantitative and qualitative measures. These include, but are not limited, to the list below:

1) *Publication record*: The Evaluation Committee will compile a holistic set of measures of publication record for each faculty member. The Chair's office will assist with this if resources allow. The measures include the following

- *Year_1st_pub*: The year of the first refereed publication
- *N_years*: The number of years elapsed since *Year_1st_pub*
- *N_ref_tot*: The total number of refereed papers
- *N_ref_3yr*: The number of refereed papers over the past three years
- *N_ref_3yr_1st*: The number of refereed papers with the faculty or his/her mentored graduate student or undergraduate student as first author over the past three years.
- *N_cite_tot*: The total number of citations (from both refereed and un-refereed papers)
- *N_cite_3yr*: The "3-year cites" or total number of citations for papers written in the last 3 years
- *Cite_rate_3yr_ave*: The average of the citation rate (number of citations per year) in the past three full calendar years, taken directly from the ADS metric tool. For example, for faculty evaluations over the academic year 2015-16, *Cite_rate_3yr_ave* is computed as the average of the ADS citation rates in the full calendar years 2013, 2014, and 2015.
- *N_cite_tot/N_years*: The ratio of the total no of citations to the total number of active years. Note that this is different from the citation rate and reflects an average over the active years.
- *Total h index* (from both refereed and un-refereed papers) in the year of evaluation.

- *Reduced h index* in the year of evaluation.

For CPR case, the publication measures should cover 6 years rather than 3 years

Publication of books or comprehensive reviews, as indicated by the faculty, will also be considered.

When using these metrics, the committee will be sensitive to the fact that any given single metric has inherent biases (see Table 1 in Appendix A), and will try to adopt a holistic approach.

2) Advising of Graduate Students: The Evaluation Committee will consider the number of graduate students supervised by the faculty, as main advisor or co-advisor, for second-year projects and Ph.D. dissertation projects. The participation of faculty in research committees and Ph.D. dissertation committees will also be considered.

3) Research Funding: The amount of grant funding secured (from CNS and UT competitions, as well as external public and private agencies) will be considered as part of research excellence. Given the terse funding landscape, we realize that many good research proposals may not be funded. Therefore, the committee will also consider the submission of grant proposals (irrespective of their funding outcomes) as a positive factor, and faculty are encouraged to include pertinent information in their summary statements.

4) Awards, invited talks, and selection to serve on important scientific committees will be considered as measures of research excellence.

5) Long-timescale projects: The committee will be sensitive to the fact that certain projects, such as the development of instruments and instrumental devices, and the conduction and analysis of large surveys require a long timescale. Thus, the number of successful instruments and instrumental devices produced, as well as active participation in large surveys, will be taken into account for evaluation of long-term research productivity.

6) Facilitation of Research: The committee will also value efforts that facilitate research; these include, but are not limited to, serving as Department Chair, McDonald Observatory Director, membership on science or instrument working groups, leadership in large project consortia.

II. Teaching

There are four principal contributions to teaching: classroom teaching, curriculum development, graduate and undergraduate training and supervision in research. The Evaluation Committee will use a holistic set of quantitative and qualitative measures. These include, but are not limited, to the list below:

1) Course Instructor Survey (CIS) scores: The average of overall course instructor score in the previous three years will be used as a component of yearly evaluations. The statistics for the whole department at the same level will provide a comparison. Whenever possible, statistics will be derived separately for non-science majors courses, majors' courses, and graduate courses. While CIS scores may give a limited measure of classroom teaching performance, they are heavily used by the CNS promotion and tenure committee, and it is therefore important that the Evaluation Committee pays particular attention to CIS scores of junior and mid-career faculty. For faculty members with particularly low CIS

scores, the Department Chair will later arrange for advice from teaching mentors and pedagogy experts at the Center for Teaching and Learning (CTL) and the Texas Institute for Discovery Education in Science (TIDES).

2) Student comments and peer reviews: The committee can also consider qualitative measures such as student evaluations of teaching, with written comments (if provided by the faculty as per section 3), and reports of the Committee on Peer Review of Teaching, when available.

3) Student advising: Teaching also includes contribution to graduate and undergraduate education through advising and research supervision. The number and types of students supervised will be considered

4) Participation in teaching workshops: Participation in scientific teaching workshops geared at learning effective teaching strategies and developing their teaching skills will be considered positively. Such workshops are offered by CNS Texas Institute for Discovery Education in Science (TIDES).

5) Broader activities: Participation in university activities related to teaching, such as core and curriculum development, Dean's Scholars, honors students, etc., are considered as part of teaching excellence.

III. Outreach

The Evaluation Committee will consider significant outreach activities as evidence of excellence. These include public presentations, working with other learning institutions (K-12, community colleges, other universities, etc.), designing educational material, and various other activities. As an example, we benefit greatly from the excellent outreach efforts of the Education and Outreach Office, and work with them is highly regarded. While the number of public lectures, visits to K-12 classrooms, etc. offer possible quantitative measures, we expect this evaluation to be primarily qualitative.

IV. Service

There are many possible ways for a faculty member to make valuable contributions in terms of service to the department, university, and the scientific community. The Evaluation Committee will examine the contributions of each individual in these areas. Examples of service contributions include, but are not limited, to the list below

- Participation in departmental, College of Natural Sciences, or University of Texas committees and activities at the national and international level that raise the prestige of the department or university. These include national and international committees, scientific organizing committees, and work with our Astronomy Program Board of Visitors. We will also note significant leadership positions (e.g., AAS officers, editorial roles, Department Chair, Associate Chair, McDonald Observatory Director, GSEC chair, UGSCOM Chair, Graduate Advisor, Undergraduate Advisor, Department SACS representative).
- Activities that contribute to diversity and aim at increasing the participation of women and other under-represented minorities in the STEM fields. We note that as of 2015, faculty coming up for

promotion and tenure will be required by CNS to submit a statement regarding their contribution to diversity.

- Fund-raising activities that support our vision plan and strategic goals

4.4 Evaluation Procedure and Steps

1. The Evaluation Committee will perform faculty evaluation in a manner commensurate with the guiding principles in section 4.2, and the evaluation criteria outlined in section 4.3. Our evaluation process must align with our vision plan, and must be informed by our values of excellence, innovation, ethical behavior, diversity, and collegiality.
2. The Evaluation Committee will follow best practices to avoid or limit biases against gender, race, and ethnicity. These practices include, but are not limited, to the following:
 - a) All committee members will take the Harvard Implicit bias test to assess their implicit associations about race, gender, and other topics:
<https://implicit.harvard.edu/implicit/>
 - b) The Evaluation Committee will set and review the criteria used for evaluation (section 4.3) *before* starting the evaluation process. This helps ensure that standards are applied consistently and accurately and guards against shifting standards in evaluating different faculty members.
 - c) The Evaluation Committee needs to check for biases (e.g., gender bias) in the annual performance reviews and category ratings it produces. Should evidence of bias be found, every effort should be made to take corrective action.
 - d) To ensure objective evaluations by each yearly committee, committee members should avoid recycling large amounts of text from previous APRs.
3. The Chair of the Evaluation Committee will assign two committee members, thereafter designated as primary and secondary reviewers, to review each faculty member. No committee member can review his/her own file or that of his/her spouse. The reviewers will consider the submitted materials outlined in section 3. They will also pay attention to any summary statement submitted by faculty members on their specific goals and styles of research, teaching, outreach, and service.
4. The primary reviewer will produce a written annual review (AR), which summarizes the performance of the faculty in research, teaching, outreach, and service; assigns a preliminary rating ("Exceeds expectations" or "Meets expectations" or "Does not meet expectations" or "Unsatisfactory"); and clearly lists the reasons for a rating other than "Meets expectations".
5. The secondary reviewer will review the AR and provide feedback to the primary reviewer. The revised AR is then submitted by the primary reviewer to the Chair of the Evaluation Committee. For cases where the reviewers diverge on the rating, the submitted AR can include both of their suggested ratings.
6. **The entire Evaluation committee** must meet in person or via electronic conference to carefully review both the text and the preliminary proposed rating(s) in each AR; and to produce a final AR ratified by the committee. *When assigning its final rating of "Exceeds expectations", "Meets*

expectations”, “Does not meet expectations”, or “Unsatisfactory”, the Evaluation committee will follow the guiding principles in section 4.2, particularly points 6a) to 6c).

Examples of achievements that might justify a category of “Exceeds expectations” include, but are not limited to, the list below:

- Teaching awards, especially University-wide ones such as the Regents award
- Authoring major review papers or books
- Major grants such as NSF CAREER grants
- Major research awards such as AAS research awards
- Major national or international service (e. g., AAS President; Editorships)
- Exceptionally high paper productivity
- Exceptionally high citation statistics (especially citation rates)
- An especially important scientific discovery or contribution
- Special excellence and creativity in research, teaching, or service roles
- Completing a major instrument or instrumental device
- Delivering a widely used, high-impact computer code

7. Based on the final ARs, the chair of the Evaluation Committee will fill in the summary spreadsheet provided by the Department Chair’s office to indicate the rating assigned to each faculty, and describe the specific reason for the rating in the cases of faculty assigned a rating other than “Meets Expectations”.

8. The Chair of the Evaluation Committee will provide **the final ARs** (produced in step 6), the **summary spreadsheet** (produced in step 7), and any additional relevant comments to the Department Chair.

9. In the case of faculty members who do not directly report to the Dean, CNS guidelines (Reference 1) require the ratings of the Evaluation Committee to be communicated to the Department Chair, who will pass them to the Dean. Either or both may further review the materials and make a separate recommendation. The Department Chair does not make any recommendation for his/her spouse.

10. In the case of faculty members (namely the Department Chair, the McDonald Observatory director and the spouse of the Chair) who report directly to the CNS Dean, the evaluation materials of the faculty and the category ratings assigned by the Evaluation Committee will be sent to the Department Chair and to the Dean. The Dean may further review the materials and make a separate recommendation.

5. References

1) CNS Dean of Faculty Affairs web page on Faculty Annual Reviews

<https://cns.utexas.edu/faculty-affairs/faculty-policies-forms-and-information/46-deans-office/faculty-affairs/409-annual-reviews>

2) UT's Faculty Annual Review guidelines.

http://www.utexas.edu/provost/policies/annual_review/14-15_Guidelines_Annual_Review.pdf

3) Michigan ADVANCE Program: Best Practices
<http://advance.umich.edu/good-practices.php>

6. Appendix

Table 1: Potential Biases Associated with Commonly Used Metrics

Criterion	Tends to Favor	Tends to Disfavor	Negative Side Effects
Total number of publications.	People working in large groups.	People working independently. Instrument builders. Code builders.	Dis-incentivizes quality Penalizes books and comprehensive reviews.
Total number of refereed publications	People working in large groups.	People working independently. Instrument builders. Code builders	Penalizes books and comprehensive reviews.
Total number of citations.	Late-career people. People working in large fields of research.	Early-career people. Instrument builders. People working in small fields of research.	Dis-incentivizes attempts to innovate. Penalizes programs with long start-up times.
Citation Rates Per Year	People working in large fields of research. People working in large groups, e.g. observational consortia People working in trendy fields of research.	People working in small fields of research. People working in small groups or independently. People pioneering new fields or working outside the trendy ones.	Dis-incentivizes quality and attempts to innovate or pioneer new fields. Penalizes programs with long start-up times. Incentivizes “group think” and headline seeking.
First-author metrics	People working in small groups.	People working in large groups. Instrument builders	Dis-incentivizes crediting students and junior scientists.
H index	Late-career people	Early career people.	
Reduced H index	Early-career people	Late career people.	
Amount of Grant Money	Instrument builders. Leaders of large groups. Mid-career people.	Early and late-career people. Members of large groups.	Dis-incentivizes moving to new research areas.