



**Natural and Mathematical Sciences Action Learning Team**  
**College of the Arts and Sciences**  
**Mentoring for Associate Professors**

**Introduction**

The Natural and Mathematical Sciences action learning team was appointed by Dean Peter March in autumn 2010. Its charge, developed in consultation with the CEOS Project, is to identify climate or cultural issues at the college or departmental level, develop strategies and implement action as a group to solve problems. Team members are:

Barbara Keyfitz, Professor of Mathematics (Chair of Team)  
Claudia Turro, Professor and Graduate Vice-Chair of Chemistry  
Jeffrey Daniels, Professor of Earth Sciences  
Joan Herbers, Professor of Evolution, Ecology & Organismal Biology  
Luis Casian, Chair of Mathematics  
Peter Curtis, Chair of Evolution, Ecology & Organismal Biology  
Richard Freeman, Professor of Physics  
Tina Henkin, Chair of Microbiology

Facilitation was provided by Tayo Switzer (Office of Human Resources); additional support was provided by Darlene Saporu (Sociology) and Folake Hannan (Physics)

**Framing the Discussion and Setting Our Agenda**

The team spent most of its first year learning and discussing data on climates within science departments at OSU. Sources of information include:

- Demographic data on faculty by rank, gender, and department
- Institutional Reports (the Zacher report, Culture Survey results)
- Results of World Café held in summer 2010 by CEOS
- Review of the literature

Data from Ohio State show some important patterns:

1. Like most research universities, women are under-represented on the faculties of most STEM departments, with most women in lower ranks
2. The patterns of faculty flux show that women in STEM departments leave the university more often than men
3. Women are over-represented among Associate Professors and take longer than males to earn the next promotion to Professor
4. Ohio State has more faculty than our peers and aspirational peers at the Associate Professor rank for 10+ years

5. In OSU STEM departments, women faculty are less satisfied with their positions, feel less connected to their colleagues, and are more likely to consider applying for other positions than male faculty
6. Participants in the World Café identified three major issues that impede career progress for women faculty in STEM: lack of formal mentoring, hostile department climates, and lack of transparency about how decisions are made

### **Formulating Goals and Objectives**

The Team discussed issues raised by the data, as well as additional insights from their personal experiences. A major theme emerged of perceptions of fairness and transparency of rules that led the team to focus on how departments can limit feelings of marginalization and perceived unfairness, particularly for women and other underrepresented minorities.

The critical time period for these issues to emerge in faculty careers at OSU is the Associate Professor stage. As an institution, Ohio State has very few guidelines for requirements for promotion to Full Professor, there is no mandated post-tenure review, and most departments have no mentoring structure for Associate Professors. By contrast, well-developed mentoring programs exist for Assistant Professors in many departments. Lack of structure, combined with enhanced service expectations for tenured faculty, can create situations whereby individuals must figure out expectations and ways to meet those expectations. Furthermore, the lack of regular structured reviews (other than the annual salary performance review) may contribute to Associate Professors' failure to progress on the path towards the next promotion.

The Team thus identified a primary objective for their work: to develop a **mentoring program for Associate Professors** that will encourage them to progress towards the next promotion.

For Ohio State to reach its goal of eminence, a department that tenures a faculty member must be as invested in his/her continued career progression thereafter as it was at the Assistant Professor stage.
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## **A Mentoring Program for Associate Professors in NMS**

### **Preliminaries**

We recommend that departments engage in the difficult but necessary discussions about what they value. Senior faculty must be frank with each other about how they review dossiers for promotion to Professor: if the ethos in a department is that research credentials are a *sine qua non*, then Associate Professors deserve to know that. Departments that are willing to consider weaker research credentials for individuals with sterling teaching and/or service records also should be forthright in committing to that set of values. Departments also should communicate those values to administrators in the approval chain. *Until these discussions take place, no department can complete its structuring of a full mentoring program.*

### **General Features of a Mentoring Program**

Once the department's values have been clearly articulated, a mentoring program can be aligned with those values. Desired features of such a program include

1. Active involvement of the departmental "power structure" – senior faculty whose opinions carry substantial weight with colleagues, who are themselves productive colleagues, and who can provide positive role models.
2. Clear guidelines for promotion to Professor with regard to teaching, research, and service as well as timelines for accomplishing milestones.
3. Identification of individuals who wish to provide mentoring and a clear reward/accountability structure within the department for providing that mentoring.
4. Active communication of mentors with all parties involved in deliberating on promotion decisions (Chair, Promotion and Tenure Committee) to avoid mixed signals.
5. Formal reviews at intervals after tenure to assess progress towards promotion (analogue to 4<sup>th</sup>-year reviews for Assistant Professors)

We recommend the following best practices:

- Emphasize very soon after awarding tenure the concept of sustaining a trajectory of accomplishment for promotion to full professor. This message should be conveyed in person by the department or P&T committee chair early in the Fall term of the promotion year. A time-line should be discussed at this meeting although the necessary length of time as Associate can reasonably be expected to vary among individuals and departments.
- Institute an annual review of Associate Professors, with clear feedback on their success in maintaining their expected trajectory to Full, by an appropriate person or committee (i.e., department chair, full P&T committee,

or P&T subcommittee). This review should include an interview and conversation with the faculty member.

- Publish very clear guidelines in departmental P&T documents about expectations in teaching, research, and service for promotion to Full.
- Disseminate in some form all activities undertaken by faculty (annual report, spreadsheet)
- Encourage all faculty to take sabbaticals (FPL)
- Identify remediation strategies for individuals (see below)
- Shelter newly-tenured faculty from too much service and teaching.

Other suggestions worth considering by departments:

- Require annual activity reports to be submitted from within OSU; pro or another format consistent with university promotion documentation
- Departments may wish to have “triggers” for extended discussions with Associate Professors whose productivity is not on track. Examples: no peer-refereed publications in x years; no new grants in y years; graduate students who fail to progress
- Actively disseminate information concerning support offices within the university (The Women’s Place, UCAT, Wellness Center, Employee Assistance Program)
- Clarify and broaden the definition of scholarship that “counts”: books, entrepreneurial activity, program grants (e.g., IGERT, facilities grants)

## **Remediation Strategies**

A subcommittee examined strategies for mentoring Associate Professors who have been in rank for 7 to 10 years and experienced a delay in their progress since tenure, but are committed to re-engaging their research. A second subcommittee looked at a more challenging group, those in rank 10+ years, who have “fallen off the research wagon” and have virtually no chance of climbing back without assistance.

### **Target: Delays in Advancement-Associate Professors in Rank 7-10 years**

We were given evidence that a model of active mentoring and collaboration has proven successful in one department for helping members of the first group. Of three Associate Professors who agreed to undergo such mentoring, one has been promoted to Full Professor, one will be recommended to the college for promotion within 18 months, and the third is now more deeply involved in research than at any time over the last 10 years. Key elements of this intervention process include:

- A mentor conducting research in an area that is close to that of the Associate Professor, or the Associate Professor being willing to change research direction to be aligned with the mentor.

- The mentor having attained such stature in his/her field that joint work can be promoted and presented with the Associate Professor having the senior ranking<sup>1</sup> (first author, lead PI, etc.).
- The mentor taking a pro-active role in obtaining presentation opportunities for the Associate Professor at meetings, and colloquia in universities.
- The mentor establishing within the department a high profile, public commitment to the advancement of the Associate Professor.
- The mentor establishing exactly with the Chair the explicit (and implicit) criteria for the promotion of the Associate Professor, with full understanding of the past history of evaluation and associated politics by and within the department.
- The mentor either explicitly given a form of release time (service and/or teaching) in order to devote the required time to the intervention project, or the mentor is so senior that the time devoted to this endeavor can be taken out of his/her research time.
- The mentor enjoying support from the Chair, through continuing positive evaluation of the mentor's work in mentoring, and in granting release time when appropriate.
- A possible short-term reduction in teaching or service load for the mentee, in return for explicit time-bound expectations.

**Target: "Associate Professors with 10+ years in Rank"**

The model above will not work for all disciplines and all individuals. We recommend that departments consider the model and adapt it to their circumstances whenever possible. The second subcommittee considered the more difficult situation of Associate Professors in whom the "commitment to re-establish a research program" was not apparent. The lull in research might have been caused by a number of factors: administrative interests, heavy committee loads, developing a primary interest in teaching, or other cause. (Another possibility – medical or psychological issues – is best handled via some of the resource centers outside the college.) Some of these factors can be seen as positive choices of the faculty member, while others are built into the culture of some departments.

Some of the suggestions this subgroup came up with can be found in the lists above, and are in the nature of:

- guidelines to keep the situation from arising, such as automatic triggers, encouragement to take sabbaticals, caution against imposing excessive committee work (even if it is undertaken voluntarily and cheerfully)
- interventions at an earlier stage, when a possible delay is first perceived

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<sup>1</sup> This might need to be modified in some departments, such as mathematics, where seniority is not indicated in an obvious way. There, the junior colleague might be required to produce at least one sole-authored work.

However, some further suggestions bear on the question of changing the culture of departments, and it is here that the emphasized comment at the beginning of this outline comes into play:

- Team research should be encouraged. In many departments, faculty members are discouraged at the beginning of their tenure track path to team with other faculty members on proposals and research projects. In some instances new faculty are told they need to have single authored papers for advancement. Early career patterns tend to carry into later work patterns to the long-term detriment of their career development.
- The definition of scholarship should be broadened. Departments might consider providing more weight to teaching, book writing, training grants, and pedagogical research. In particular, few departments currently have reliable standards for “excellence” in any of these pursuits. Development of such standards will be a necessary background for encouraging career progress in any of these areas.
- Finally, it is suggested that Associate Professors with 10+ years in rank who are not interested in pursuing any kind of remediation should be willing to have an adjusted workload (e.g., enhanced teaching and service responsibilities) that would bring appropriate rewards. These rewards, however, might not include promotion to full rank.

### Bibliography

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