

College of Science Promotion and Tenure Manual July 2011

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1. Introduction and general considerations

The procedures and policies described in this manual are intended to be completely compatible with University policy as outlined in Chapter 7 of the Faculty Handbook. Generally, the material in this manual will not repeat material in the Faculty Handbook and will, instead, describe procedures not covered by the Faculty Handbook.

Candidates and other faculty members involved in the promotion and tenure process, particularly department chairs, should be familiar with procedures stated in the Faculty Handbook.

2. Responsibilities of the candidate

The two primary responsibilities of the candidate for promotion and/or tenure are to provide the department chair with a list of possible external evaluators of the candidate and to prepare the promotion/tenure file for review.

External evaluators. Although the UAH procedures require letters from peer evaluators outside the university only for candidates for promotion to professor, the College of Science requires external evaluations for promotion to associate professor and for tenure as well. The candidate will provide the department chair with the names of two persons who the candidate

believes are able to evaluate the candidate's record. This should occur by June 1st at latest. Neither of the two persons may be UAH faculty or staff members.

The department chair will consider the evaluators proposed by the candidate along with others proposed by the chair and members of the promotion/tenure committee and will select at least five evaluators. Except in unusual circumstances, the evaluators will hold at least the academic rank (or equivalent) for which the faculty member is a candidate. Except in very unusual instances, the evaluators selected should not have a relationship with the candidate as graduate or postdoctoral advisors, or other significant affiliations. Co-authors and co-PIs or co-Is on grants and contracts may be selected as evaluators if they are proposed by the candidate and if the collaboration between the candidate and the co-author or co-PI has not been extensive and has not produced a substantial portion of the candidate's research output. The evaluators selected should not be UAH faculty or staff members. The candidate will be informed of the chair's selections and will be given the opportunity to register any objections, in writing, to the chair. The chair may amend the list in view of the candidate's objections, but the final decision on evaluators rests with the chair. The chair will receive from the candidate packets of information to send to outside evaluators. Each packet will contain:

- The candidate's CV
- No more than five representative research publications of the candidate
- A signed form indicating whether the evaluative letters may be kept confidential.

The promotion/tenure file. The candidate, with the assistance and guidance of the chair, is responsible for preparing the candidate's promotion/tenure file by October 1. The file should be limited to two three ring binders each with a spine no thicker than two inches. One binder should contain the primary materials and the other supporting documents. Plastic covers are not to be used to cover pages in the curriculum vitae, although plastic covers may be used to hold off-prints and other multi-page documents. As much material as possible should be double-sided.

The candidate should submit a promotion/tenure file consisting of the following materials, in the order given below.

Primary materials

1. Title Page
2. Table of Contents
3. Candidate's Statement
4. Summary of Professional Career
 - a. Curriculum Vitae
 - b. Primary teaching materials
 - c. Primary research materials
 - d. Primary service materials

Supporting Materials

5. Annual activity reports and performance evaluations
6. Supporting teaching materials
7. Supporting research materials
8. Supporting service materials.

Additional information on some sections of the promotion/tenure file is given below.

The Candidate's Statement should be an argument summarizing the candidate's reasons why the proposed action (promotion and/or tenure) is justified. The Statement should be no longer than three pages.

The Curriculum Vitae should contain information about the candidate in the following order:

- Name.
- Home address.
- Work address.
- Date and place of birth.
- Citizenship.
- All academic degrees, in chronological order, including dates, majors and minors, granting institutions, honors, titles of thesis and dissertation, and other pertinent material.
- Professional employment history, in chronological order.
- Professional memberships, including titles and dates of offices held
- Awards and honors.

Primary teaching materials should be presented in the following order:

- One page executive summary of teaching accomplishments and highlights.
- Statement of teaching philosophy.
- Special awards and honors related to teaching.
- Courses taught, in chronological order, including numbers of students and SIE scores. For courses taught more than once by the candidate, SIE scores should be presented in graphical form with overall SIE score plotted against semester and year. All comments written by students on the SIE forms should be presented.
- Graduate students supervised, in chronological order, including degrees, theses, and dissertations.
- Graduate student committees, in chronological order, including degrees, theses, and dissertations. Students supervised by the candidate should not be included here.
- Advising activities, including a brief description of the student advising work, especially non-standard work such as advisement of student organizations.
- Curriculum and program development. This should include brief descriptions of courses developed or significantly modified by the candidate. This should also include teaching innovations and the utilization of new teaching technologies and the impact that such developments had on student learning.
- Textbooks and other instructional publications. This list should include all non-research publications.
- Peer reviews of teaching. Reports of peer teaching reviews should be included here.
- Unsolicited testimonials and reviews. The candidate should provide copies of letters, reviews, etc. that testify to the effectiveness of the candidate's teaching.

Primary research materials should be presented in the following order:

- One page executive summary of research accomplishments and highlights.
- Brief statement of areas of research interest and expertise.
- Concise overview of research activity. This should contain brief descriptions of major research projects.
- Special awards and honors for research.

- Publications in chronological order. This should consist of a numbered list of all research publications, grouped as indicated below. Each entry should give the full title of the paper, the full list of authors as it appeared in print, the journal name, volume number, beginning and ending page numbers, and date. In cases of joint authorship, the candidate should include a clear description of his or her contribution to the publication. Publications should be grouped as follows:
 - a. Refereed research publications. Include only publications that have already appeared in print or on-line in an electronic journal.
 - b. Refereed research manuscripts accepted for publication. The term “accepted” means that an editor has written to the authors that the manuscript is accepted in its final form.
 - c. Research papers submitted for publication. A paper is considered “submitted” until it is accepted in final form.
 - d. Refereed research conference publications.
 - e. Non-refereed research publications. List material that has appeared in print, including papers presented at conferences and published as transactions, abstracts, and proceedings.
 - f. Technical reports and final reports on grants and contracts.
 - g. Other research publications including books and conference proceedings for which the candidate was editor or co-editor.
- Patents, disclosures, and copyrights
- Significant processes, devices and software developed.
- Funding history. This should be a chronological list of research funding including grants, contracts, and other sources of research funds. Each entry should contain the full title of the award, the full list of authors as it appeared on the proposal, the status of the candidate (Principal Investigator, Co-Investigator, etc.), the funding agency or entity, amount of award, award period. A candidate should be very clear about his or her role in the project and the funding level of multi-year awards.
- Research proposals submitted but not awarded. This should be a chronological list of proposals. Each entry should contain the full title of the proposal, the full list of authors as it appeared on the proposal, the status of the candidate, the funding agency or entity, the proposed amount, and the proposed award period. The status of each proposal (declined, submitted, etc.) should be clearly stated.
- Awards of research time at externally supported research facilities such as observatories, particle accelerators, and x-ray beams should be documented.
- Unsolicited testimonials and reviews.

Primary service materials should not duplicate material presented as teaching and research materials and should be presented in the following order:

- One page executive summary of service accomplishments and highlights.
- Service to the department in chronological order, including committees (indicating committees chaired) and other noteworthy contributions.
- Service to the College of Science in chronological order, including committees (indicating committees chaired) and other noteworthy contributions.
- Service to UAH in chronological order, including committees (indicating committees chaired) and other noteworthy contributions.
- Service to the professional community in chronological order, including committees (indicating committees chaired) and other noteworthy contributions. These include service as external reviewer for proposals and manuscripts.
- Outreach activities.

- Unsolicited testimonials and reviews.

The annual activity reports section should include, in chronological order, all annual activity reports submitted by the candidate and the evaluations by the department chair during her or his appointment at UAH.

Supporting teaching materials should include in chronological order

- Title pages and acknowledgments from dissertations and theses supervised.
- Copies of no more than ten peer reviewed professional papers on teaching and related matters.
- Other relevant material.

Supporting research materials should include in chronological order

- Copies of the five most recent and no more than ten other key research publications in chronological order. If room permits, copies of the entire publication as it appeared in print should be used. Otherwise, the candidate should decide which papers she or he wishes to include in entirety and include only the first page of others. For those papers that are not yet in print, a copy of the editor's letter of acceptance should precede the unpublished manuscript or first page. Noteworthy citations of a particular publication may also be included in this section.
- Copies of the summary and budget summary pages of all proposals that the candidate submitted as PI or co-PI since the candidate's last promotion and that resulted in the award of a grant or contract. If the grant or contract has been completed, a copy of the final report and indication of resulting publications or citations may be included here.
- Full copies of all proposals currently pending, if space permits.
- Copies of the summary and budget summary pages of all proposals that the candidate submitted as PI or co-PI since the candidate's last promotion that were declined by the funding entity. A copy of the reviewers' comments should be included as well.
- Sources and nature of other research support for the candidate since the candidate's last promotion. This can include grants and contracts for which the candidate was neither PI nor Co-PI.
- A chronological list of all UAH students, identified as graduate or undergraduate, who have been supported on grants for which the candidate was PI or co-PI.
- Summary of Science Citation Index references to the candidate's research papers.

Supporting service materials should include in chronological order any other service-related material deemed appropriate by the candidate.

3. Responsibilities of the department chair

The department chair is responsible for soliciting and receiving letters of evaluation from external evaluators, for reviewing the promotion/tenure file submitted by the candidate to ensure that it conforms to the format and substance specified in this document, for writing the chair's recommendation, and for ensuring that the departmental review process conforms to UAH and College of Science policies and practices. The chair will also give a copy of the College of Science Promotion and Tenure Manual to the candidate and include a copy of the Manual in the candidate's promotion/tenure file.

Mentoring of assistant professors. Throughout the candidate's probationary period as an assistant professor the chair should assure that the candidate is effectively mentored on teaching, research, and service by one or more members of the departmental faculty. A brief description of how the candidate was mentored should be included in the chair's letter of recommendation (see below).

Notification of mandatory tenure candidates. By May 15, the department chair will notify those candidates serving in their mandatory year for a decision on the award of tenure that the review process is to begin. The list of mandatory tenure candidates will be transmitted from the dean to the department chair.

External letters of evaluation. The department chair will consider the evaluators proposed by the candidate along with others proposed by the chair and members of the promotion/tenure committee and will select at least five evaluators. The candidate will be informed of the chair's selections and will be given the opportunity to register any objections, in writing, to the chair. The chair may amend the list in view of the candidate's objections, but the final decision on evaluators rests with the chair. The chair will receive from the candidate packets of information to send to outside evaluators. Each packet will contain

- The candidate's CV
- No more than five representative research publications of the candidate
- A signed form indicating whether the evaluative letters may be kept confidential.

The chair is strongly advised to call or e-mail potential evaluators by July to determine whether they can submit letters in time for them to be fully considered by the department. The chair must solicit enough letters to be confident that at least three of them will actually arrive. The chair will ensure that more than half of the letters received are from outside the candidate's list. The chair will write to each of the external evaluators using a letter modeled on the one included as an appendix to this document. All correspondence between the chair and external evaluators, including email exchanges, will be added to the promotion/tenure file along with the evaluative letters themselves. In addition, the file should contain a brief statement of the expert qualifications of each evaluator. This may be in the form of the evaluator's CV, an extract from Who's Who in Science (or equivalent), or a statement written by the chair.

Review of promotion/tenure file. The candidate has primary responsibility for preparing the promotion/tenure file. The department chair, however, will review the file as soon as it is submitted to ensure that it conforms to the format (including order of material) and substance required in the Faculty Handbook and this document. The chair will, as soon as possible after receiving the file, inform the candidate about missing material and significant departures from the expected format of the file. It is then up to the candidate to supply the missing material or replace defective material in time for the completed file to be reviewed thoroughly by the department.

Recommendation of the chair. The chair will submit a recommendation separate from that of the departmental committee. The chair will confirm that the departmental review process conformed to UAH and College of Science policy and that the departmental faculty has exercised the highest professional standards in making its recommendation. If there have been lapses in the review process or in the professional conduct of the faculty, the chair will describe such lapses and steps taken to mitigate the effects of the lapses.

The chair will give her or his own recommendation with full justification. The chair will use all the standards and criteria used by the departmental committee, but will also address the

impact of the recommendation on departmental needs and plans. The recommendation of the chair will become part of the promotion/tenure file.

Managing the departmental review process. The chair has responsibility for managing the promotion/tenure review process within the department. The chair is responsible for the integrity of the review process and for ensuring that it conforms to UAH and College of Science policies and practices. Some specific managerial responsibilities of the chair are

- Obtaining evaluative letters (see above).
- Forming the promotion/tenure committee. By October 1, and following consultation with the candidate, the dean, and prospective committee members, the chair appoints the departmental promotion/tenure committee. The Faculty Handbook (7.9.5 and 7.9.6) describes the eligibility criteria and composition of the committee.
- Informing the committee of special circumstances involving the candidate including specific agreements that have been negotiated regarding the candidate's responsibilities in teaching, research, and service.
- Ensuring that the committee report includes a specific recommendation, contains a written rationale, records the committee vote, and is signed by all members. If the vote was not unanimous and if desired by the minority members, a minority report should be included. If no such report is desired by the minority, a statement to that effect should be included in the minority report. If the report does not include all these components, the chair will return it to the promotion/tenure committee chair to be completed.
- Ensuring that all review materials including the promotion/tenure file, the evaluative letters (and accompanying information about the evaluators), the committee report, and the chair's recommendation reach the dean by November 1. At the same time review materials are forwarded to the dean, the chair will inform the candidate of the committee and chair recommendations.

4. Responsibilities of the departmental committee

The recommendation of the departmental promotion/tenure committee should address the following issues

- On what basis is the committee able to evaluate the effectiveness of the candidate's teaching? This should not be merely a recitation of SIE scores but should contain specific examples and testimony.
- How does the candidate's teaching expertise fit into the department's long-range plans and needs? This is an issue primarily in tenure decisions.
- How effective is the candidate at supervising graduate students? The candidate may not have been at UAH (or elsewhere) long enough to have supervised many, if any, dissertations. Nonetheless, the candidate's record and potential for producing Ph.D.s, including relevant interdisciplinary doctoral programs, should be addressed in the recommendation. The candidate's record of supervision of M.S. students should also be assessed.
- Are the candidate's research papers significant? Here the committee should indicate which are the candidate's most significant research contributions, what part the candidate played in them, and why they are significant. A mere tally of publications is not a satisfactory assessment of the quality of the candidate's research.
- How does the candidate's research fit into the department's long-term plans? Every department should have a strategic plan and the role of the candidate in this plan should be indicated. If there is no written strategic plan, the committee should show

how the candidate's research fits into the department's informal plans. This is an issue primarily in tenure decisions.

- How will the candidate continue to develop professionally? The committee should indicate reasonable expectations for future development of the candidate. For promotion to associate professor, the committee should indicate whether the candidate is making progress toward eventual promotion to professor according to the qualifications and standards laid out in the Faculty Handbook.

The committee will prepare a report that includes a specific recommendation, contains a written rationale, records the committee vote, and is signed by all committee members. Although care must be taken to ensure that both the positive and negative conclusions of the committee are included in the report, a minority report may be included if dissenting committee members so wish. If no such report is desired by the minority, a statement to that effect should be included in the committee report. The report is described more fully in the Faculty Handbook (7.9.7). The committee will make the report available to the department chair, who will submit it to the dean after ensuring that it is complete. The departmental committee report will become part of the promotion/tenure file.

5. Responsibilities of the Promotion and Tenure Committee

The Promotion and Tenure Committee (PTAC) has two essential responsibilities. The first is to review and evaluate the promotion/tenure file using the same standards and criteria as the departmental committee. The second is to help ensure the integrity of the review process. The PTAC will ensure that the department has adhered to high standards, that the promotion/tenure recommendation has been made solely on the highest possible professional basis, and that the department has carried out a thorough review. The PTAC should assess the departmental recommendation to see that it has carefully addressed all the components described above. The PTAC will ensure that all candidates have been treated fairly and equally. To do so, the PTAC will ensure that the standards set by any department are consistent with the overall standards of the College of Science.

The review carried out by PTAC is described in the Faculty Handbook (7.9.9). If any item is questioned or if additional information is requested, the chair of the PTAC will make the request or seek clarification through the dean. The report of the PTAC will include a specific recommendation, contain a written rationale for the recommendation, record the committee vote, and be signed by all members. As with the departmental report, a minority report may be included, but is not required. If no such report is desired by the minority, a statement to that effect should be included in the committee report. The PTAC forwards its report to the dean by December 1. The PTAC report will become part of the promotion/tenure file.

6. Responsibilities of the dean

The dean is responsible for managing the review process at the college level. Specific responsibilities of the dean are to

- Ensure that faculty members who are serving in their mandatory year for a tenure decision are informed by their chairs by May 15 that the evaluation process is to begin.
- Discuss with the department chair the makeup of the departmental review committee. This will occur before October 1.

- Supervise the election of the Promotion and Tenure Committee. The process for electing the PTAC is described in the Faculty Handbook (7.9.8). The election will take place by October 15.
- Review promotion/tenure files submitted by departments to ensure their completeness. If a file is incomplete, the dean will request missing information from the department chair.
- Hold a preliminary meeting with the PTAC to review their duties and responsibilities, discuss any unusual situations or conditions related to candidates, and review college standards and criteria for promotion and tenure.
- Receive the reports of the PTAC. The dean will ensure that the reports are complete. If a report is incomplete, the dean will return it to the PTAC to be completed.
- Review the material submitted by the candidate, evaluative letters, the recommendation of the departmental review committee, the recommendation of the department chair, and the report of the PTAC. Based on this material and her or his own judgment the dean will prepare a recommendation to the Provost. The recommendation will be in writing, and will contain a specific recommendation about promotion and/or tenure and the reasons and rationale for the recommendation. The dean's recommendation will become part of the promotion/tenure file.
- Submit all promotion/tenure materials, including the dean's recommendation, to the Provost by January 15.
- Transmit the recommendations of the PTAC and the dean, without rationales, to the candidate and the department chair by January 15.

7. Criteria for Promotion and Tenure

Very general statements about criteria for promotion and tenure are given in Chapter 7 of the *Faculty Handbook*. This section describes how these general criteria are applied in the College of Science. College-wide criteria are given first, followed by additional or alternative, stronger criteria for each department. The collegiate and departmental criteria, as part of the Promotion and Tenure Manual, should be given to new faculty members early in their first semester on the faculty. The criteria are intended to provide guidance for candidates and should not be thought of either as a check-list for promotion and tenure or as absolute standards which must be met in every successful candidacy. Great strength in one area can compensate for comparative weakness in another. The candidate's entire career, not just the part spent at UAHuntsville, should be considered in determining whether various criteria have been met.

College-wide criteria

Promotion to associate professor and tenure.

- Research effectiveness. The candidate should have a sustained and continuing record of publishing research results in peer reviewed journals and refereed conference proceedings. The candidate's record should also show a steady effort to obtain peer reviewed external research funding.
- Teaching effectiveness. In addition to effective classroom teaching, the candidate should have successfully supervised at least one master's thesis or doctoral dissertation.

Promotion to professor.

- Research effectiveness. The candidates record should include peer reviewed journal papers and conference proceedings sufficient to demonstrate a sustained, continuing publication record. The candidate should be able to demonstrate the development of a nationally and internationally recognized coherent body of work. The candidate should have a consistent record of external research funding including peer-reviewed research funding.
- Teaching effectiveness. In addition to continued effectiveness in classroom teaching, the candidate should have successfully supervised at least one doctoral dissertation.

Atmospheric Science

Promotion to associate professor and tenure.

- Research effectiveness. One or more peer-reviewed journal articles per year, presentations at national and international conferences, supervised at least one M.S. or Ph.D. student to degree completion or near completion, support of graduate students by means of GRAs.
- Teaching effectiveness. Served on graduate student supervisory committees, served as Outside Observer for the Graduate College, demonstrated excellence in teaching.
- Service effectiveness. Served on at least one university wide committee, active in departmental service.

Promotion to professor.

- Research effectiveness. Two or more peer-reviewed journal articles per year averaged over the last five years; an international reputation as evidenced by invitations to give keynote addresses, plenary talks, and similar presentations at international conferences, professional awards from a major scientific society, or similar recognition; graduated at least one Ph.D. and two MS students with at least one more Ph.D. student near completion; strong record of support of graduate students by means of GRAs; record of supporting students to attend technical conferences.
- Teaching effectiveness. Served on graduate student supervisory committees, served as Outside Observer for the Graduate College.
- Service effectiveness. Serve on University-wide committees and be active in departmental service.

Biological Sciences

Promotion to associate professor and tenure.

- Research effectiveness. A record of peer-reviewed publications indicative of a successful and sustainable research program. Typically, an average of one publication per year, with the majority of the work performed since coming to UAHuntsville. However, especially significant publications in very prestigious journals in the faculty member's field may carry more weight than a single

publication in the promotion and tenure decision. At least one active federal, foundation, or industry supported grant at the time of the tenure review.

- Teaching effectiveness. SIE scores and student success rates that indicate effective teaching. Record of service on graduate thesis committees. Graduation of at least one master's student in Biological Sciences or one Ph.D. student.
- Service effectiveness. Service on at least one university wide and one departmental committee. Participation in departmental activities.

Promotion to professor.

- Research effectiveness. A significant number of peer reviewed papers in high impact journals. Other scholarly activities such as holding offices in professional societies, invitations to organize or chair sessions at national and international conferences, membership on scientific panels, editorial boards of professional journals.
- Teaching effectiveness. Successful supervision of M.S. and/or Ph.D. students to completion of degree requirements. Service on graduate committees.
- Service effectiveness. Service on at least one university wide committee and chair of at least one departmental committee. Service to the discipline as a reviewer, editor, meeting organizer, officer of a state or national organization, or other such activities. Service to the community based on the candidate's professional background.

Chemistry

Promotion to associate professor and tenure.

- Research effectiveness. Demonstrate an ability to develop a nationally recognized independent research program at UAH. One to two peer reviewed publications annually in well-respected journals, research funding from external sources as P.I. or co-P.I., regular citation of papers by other workers in the field.
- Teaching effectiveness. Supervise at least one M.S. or Ph.D. student to degree completion or near completion,

Promotion to professor.

- Research effectiveness. Record of steady external funding and indications it will continue, consistent publication record, development of research projects distinct from those used to gain tenure.
- Teaching effectiveness. Successful supervision to degree completion of at least one Ph. D. and two M.S. students with at least one more Ph.D. student near completion.

Computer Science

Promotion to associate professor and tenure.

- Teaching effectiveness. Fulfilling academic advising responsibilities, service on thesis and dissertation committees.
- Service effectiveness. Service on departmental committees, participation in faculty meetings.

Promotion to professor.

- Research effectiveness. External research funding that has led to publications and supported students.
- Teaching effectiveness. Service on thesis and dissertation committees.
- Service effectiveness. Service on university committees such as the Faculty Senate, Graduate Council, etc.

Mathematical Sciences

Promotion to associate professor and tenure.

- Research effectiveness. A strong record of publication of quality research papers in recognized quality refereed journals. Coherent, high quality research program.
- Teaching effectiveness. Show the potential to direct the research of doctoral students.

Physics and Astronomy

Promotion to associate professor and tenure.

- Research effectiveness. One or more peer-reviewed journal articles per year, presentations at national and international conferences, supervised at least one Ph.D. student to degree completion or near completion, supervised at least one MS thesis student to degree completion, support of graduate students by means of GRAs.
- Teaching effectiveness. Served on at least three graduate student supervisory committees, served as Outside Observer for the Graduate College, demonstrated excellence in teaching a range of departmental courses.
- Service effectiveness. Served on at least one university wide committee, active in departmental service.

Promotion to professor.

- Research effectiveness. One or more peer-reviewed journal articles per year, an international reputation as evidenced by invitations to international conferences, professional awards from a major scientific society, or similar recognition, graduated at least one Ph.D. and two MS with thesis students with at least one more Ph.D. student near completion, strong record of support of graduate students by means of GRAs, record of supporting students to attend technical conferences.
- Teaching effectiveness. Served on at least five graduate student supervisory committees, served as Outside Observer for the Graduate College at least four times.
- Service effectiveness. Participated as a leader in at least one university related student event, served at least one term on two university wide committees.

Space Science

Promotion to associate professor and tenure.

- Research effectiveness. One or more peer-reviewed journal articles per year, presentations at national and international conferences, grant and contract support to ensure support of research program including student support.
- Teaching effectiveness. Served on graduate student supervisory committees, is an accomplished teacher and mentor of students, supervised at least one Ph.D. student to degree completion or near completion, or supervised at least one MSc (thesis) student to completion, support of graduate students by means of GRAs.
- Service effectiveness. Served on least one departmental, college, or university committee, engaged in an organizational and/or leadership role in his/her research community, active in general departmental service.

Promotion to professor.

- Research effectiveness. Two or more peer-reviewed journal articles per year averaged over the last five years; an international reputation as evidenced by invitations to give keynote addresses, plenary talks, and similar presentations at international conferences, professional awards from a major scientific society, or similar recognition; grant and contract support to ensure support of research program including student support.
- Teaching effectiveness. Served on graduate student supervisory committees, graduated at least two Ph.D. students, or one Ph.D. and two MS (theses) students, with at least one more Ph.D. student near completion; strong record of support of graduate students by means of GRAs; record of supporting students to attend technical conferences.
- Service effectiveness. Served on departmental, college, and University-wide committees, engaged in an organizational and leadership role in his/her research community and be active in general departmental service.