

FACULTY OF SCIENCE

CRITERIA FOR MERIT INCREMENTS, TENURE, AND PROMOTION

FOR

ACADEMIC FACULTY MEMBERS

**Effective:
July 1, 2021**

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1. Introduction

Under the terms of the Schedule A of the *Collective Agreement between the Governors of the University of Alberta and the Association of the Academic Staff* of the University of Alberta, July 1, 2020 to June 30, 2024 (hereafter the '[Schedule A](#)'¹), the Faculty Evaluation Committee (FEC) is required to periodically review guidelines used in determining the award of merit increments, tenure and promotion (Article A6.03.2). Such a review must take place at least every ten (10) years. Any guidelines developed by the FEC must first be reviewed by Faculty Relations and then approved by the Provost and Vice-President (Academic) and the Academic Faculty Members of Faculty Council prior to implementation (A6.03.7).

Schedule A provides for the procedures to be followed in determination of the award of merit increments, tenure and promotion. Particular attention should be drawn to the following article: **A6.16.3 "All decisions of FEC are by majority vote of the members present and eligible to vote."**

This document was approved by the Faculty of Science Faculty Council on the 19th of May 2022 and a decision was also taken by Council to make the effective date of this document the 1st of July 2022, and will be used by FEC to evaluate work done during the July 2021 to June 2022 period.

2. Criteria

The Faculty of Science has traditionally used performance in research, teaching, and service in arriving at recommendations regarding the award of merit increments², tenure and promotion.

In the Faculty of Science, achievements in research and teaching are deemed, in general, of greater importance than service. However, competence in service is also considered in judging an individual's overall performance, especially as the faculty member progresses through the ranks.

The FoS affirms its commitment to EDI and any evidence that the faculty member has pursued activities towards advancing EDI in their research and/or teaching and/or service is appreciated and recognized as meritorious.

This document describes in detail the principles to be followed in evaluating performance in these three areas: (a) Research and Scholarly Activity, (b) Teaching, and (c) Service.

¹ Henceforth, all mentions to 'Articles' in this document are references to articles of Schedule A.

² 'Increment' means the basic unit by which a Staff Member's salary is increased.

A. Research and Scholarly Activity

A key element of the University mission is to discover and disseminate new knowledge, which is the objective of the research of faculty members. There are many measures of the excellence of research.

Evaluation of the achievement of a faculty member in this area will use the following criteria:

- Refereed publications:
 - quality and quantity of published work in refereed journals or other refereed venues;
 - citations in the literature implying a new idea or an important work.
- Non-refereed publications:
 - books and monographs;
 - chapters in books and/or review articles;
 - scholarly/technical reports.
- Technical contributions:
 - computer software or hardware that advances the state-of-the-art;
 - patents where the invention is of a scientific or technical nature.
- Training of highly qualified people:
 - supervision of graduate students;
 - supervision of PhDs;
 - supervision of undergraduate students;
 - supervision of technical staff.
- Invited presentations:
 - invitations to deliver addresses at national-international conferences, summer-winter schools, workshops and/or other institutions.
- Peer group recognition that may take the form of:
 - election to office or committees in national or international scholarly professional organizations;
 - editorship of books or journals;
 - service on conference committees;
 - invitations to consult;
 - invitations to evaluate or review work of others;
 - invitations to membership of grant selection committees or other national committees;
 - awards in recognition of the excellence of scholarly work;
 - election to well-known and respected scholarly societies;
 - invitations to chair sessions at national-international conferences or symposia.
- Research grants and contracts:
 - award of research grants and contracts.

Beyond the above criteria, additional activities such as commercialization activities, contributions to professional and policy reports, public dissemination and knowledge translation activities may also be considered meritorious.

B. Teaching

One of the major functions of the University is to transmit knowledge. This function cannot be considered in isolation from the function to create new knowledge (through research). An effective teacher has to be able to stimulate the intellectual inquisitiveness of the students by bringing to their attention the latest research findings and professional debates in their discipline. Thus, teaching effectiveness is linked with research. An effective teacher not only transmits knowledge but helps the students develop skills to critically examine and evaluate ideas and arguments and, eventually, to generate ideas of their own.

The concept of teaching is not confined to classroom instruction but includes such activities as participation in the supervision of laboratories, seminars, colloquia, tutorials, individual and group discussions, supervision of graduate and undergraduate students, and the development of innovative teaching methods.

In evaluating the effectiveness of a faculty member as a teacher, some of the attributes to be considered are their ability and willingness to:

- organize and present lectures at a level appropriate for the course;
- communicate effectively with students;
- stimulate intellectual inquiry and to foster learning in the students;
- present the latest research findings and debates in the discipline (where appropriate);
- make themselves available to students;
- participate in activities related to teaching such as advising students in selecting courses and assisting them in defining their long-term goals (see also 'Service');
- produce textbooks of high quality and have them published;
- develop and update course materials (lab materials, course notes, etc.); and,
- teach courses at various levels.

C. Service

The functions of the University and professional bodies require that, at some time or other, the members of the faculty engage in activities outside the scope of research and teaching in service of their discipline. These activities may include the following.

1. Service to the Community at Large

Service to the community is intended to include general service related to scholarly activities and interests. In general, any science-based service with a demonstrable impact on society is regarded as service to the community at large.

Such service can be considered by FEC when it requires special academic or professional expertise. These activities include the transmission of scientific knowledge to the public. For example, interviews and articles in the news media, operation of facilities visited by the public, contribution to continuing education and special programs, and professional services to schools and colleges, may be considered.

Another important category of service to the community at large is providing advice to governments or other organizations acting for the public good, on science-based policy or other scientific matters.

2. Service to the Professional Community

Such activities include the participation on committees in professional organizations, e.g. grant selection committees, and organizing committees for conferences and workshops, editorship of journals, refereeing for journals and conferences, and reviewing research grant/contract applications.

3. Service to the University Community

These services involve participation on committees at various levels within the University community, such as GFC and its standing and ad-hoc committees, Faculty, and Department committees. Some of these activities are inseparable from teaching functions, particularly student advising. It is to be recognized that whereas all faculty members should be able to advise students in the choice of courses and their long-term goals, certain members of the faculty are appointed as student advisors and take on the majority of these duties.

Another form of University service is mentoring and coaching other staff, including mentoring Assistant Professors to tenure.

Faculty members can also serve the University community through leadership roles in preparing large-scale grant applications (e.g. CFI, NCE) or nomination packages for major national and international awards, through activities related to commercialization of research results and/or technology transfer, and through participation in activities related to fundraising, development, and/or alumni relations.

3. Evaluation of Criteria

A. Research

Of all the criteria listed, the one used most extensively, in the Faculty of Science, is the quality and quantity of published work in refereed venues of international stature.

Impact factors and/or acceptance rates of refereed venues are useful measures of venue quality. However, it is the responsibility of the Chair of the Department to evaluate, through consultation with their colleagues and the use of expert opinion in the field, the quality of the research and scholarship of an individual.

It is also the responsibility of the Chair to make a judgment (and be able to defend it) as to what constitutes a fully-refereed paper. For example, a manuscript that is rigorously refereed in its entirety and appears in a prestigious refereed conference proceedings or edited volume may qualify as the equivalent of a full journal paper. However, a published conference abstract or a manuscript that is only informally referred, or refereed only in part, would not be considered the equivalent of a refereed journal publication.

A scholarly/technical report to a private or government agency, published or unpublished by that agency, may be considered as a publication where the evidence of rigorous peer review is provided. Care must be taken to avoid double counting of scholarly/technical reports or invited talks if either is subsequently published in refereed journals.

Extensive citation of a paper is usually a measure of the importance of the work although a lack of citations does not necessarily reflect on the quality of the work. The use of citations has to be made with care since the number of citations obviously depends on the size of the scientific community in the area of research. Some excellent published works wait to be 'discovered' and recognized as important by workers in a field. It is recognized that citations can also reflect negative opinions of a paper.

In the case of joint authorship of papers, every effort will be made with the assistance of the Chair of the Department concerned to assess the value of the individual's contribution to the team effort.

The authorship of a book, though a time-consuming activity, does not necessarily imply research activity as such. A senior level book, to be used at the graduate level or as a reference book, generally demands considerable research effort. The quality of the book, just as the quality of other published work, has to be determined and one measure is obtained from post-publication reviews by experts in the field.

The award of sustained and increasing research grants from a peer-reviewed body (for example, NSERC, CIHR, and SSHRC, etc.) may also be a measure of the quality of research carried out by an individual. However, care must be taken not to compare grant values across disciplines or sub-disciplines.

Invitations to deliver scholarly talks or major addresses to one's peers are a measure of leadership in the field.

Peer recognition, which takes various forms (see 'Criteria'), is also a measure of scholarly achievement.

B. Teaching Activity

There are several ways for a Chair to judge effectiveness in teaching in broadly-based, multi-faceted ways (A6.03.4), such as:

- assessment by students through a questionnaire and/or commentaries (i.e., USRI scores and comments; see Appendix I for mandatory USRI questions);
- direct assessment by the Chair, or a designate, of teaching delivery;
- peer assessment of teaching delivery;
- assessment, by the Chair, or knowledgeable colleagues of lecture content, assignments, examinations and other course content;
- assessment of the success of mentoring and/or supervision of graduate students, undergraduate students, postdoctoral fellows, and technical staff;
- assessment of participation and communication effectiveness in seminars, colloquia, and meetings;
- assessment of instructional materials produced by the faculty member;
- reviews by administrative officials; and,
- assessment, by the Chair, of the extent to which the educational goals of the department are met.

It shall be the responsibility of the Chair to present evidence of a faculty member's teaching effectiveness using the above as a guide.

C. Service Activity

The Chair shall make every effort to assess the effectiveness of the service provided by the individual to each of the different communities.

In assessing the value of service activities all reasonable efforts shall be made to secure information on the success of such operations from the relevant sources.

In assessing accomplishments in the area of International Development the difficulty of the circumstances under which an individual has to work must be considered.

D. Supplementary Professional Activity (SPA)

SPA can be regarded as meritorious to the extent that it represents professional development of the staff member or otherwise directly contributes to the university's goals of having tangible positive impact on society. Refer to the Faculty of Science *Guidelines for Supplementary Professional Activities and University Industry Relationship* document for reporting and procedural details related to SPA.

4. Merit Increments

A. General Statements

The merit increment has to be earned through meritorious achievements and is by no means an automatic right of the individual, or based on their years of service. The award of merit increments is based on an individual's performance during the twelve-month period defined by the Annual Report required in the Faculty of Science.

It shall be the responsibility of the Department Chair to provide information to FEC on the faculty members' activities using the guidelines from Section II, using the Chair's Recommendation Form.

At times, circumstances make it difficult to assess an individual's research activity in a twelve-month period. This may happen, for example, if an individual must develop intricate instrumentation, experimental apparatus, or a software package. Such activities may at times result in no refereed publications, even though such activities are imperative and indispensable for the future success of the research. In such cases it shall be the responsibility of the Chair to satisfy the committee that the individual is involved in 'development' work of considerable importance. In addition, other indicators of research activity would be expected to be documented.

Performance over multiple years, due to the long gestation of certain research results, may be recognized in a single reporting period.

The committee must judge the overall performance of an individual without assigning any numerical weights to each activity. Individuals who have reduced teaching loads due to research chairs, awards, or other assigned duties, will not be penalized for having a lighter teaching load. However, they are expected to demonstrate good teaching quality in the reduced number of courses they teach and are expected to achieve higher levels of appropriate research/service productivity than individuals with regular teaching loads.

B. Research

The best, and most reliable, evidence of research activity is the publication of research papers in refereed journals, conference proceedings, books and book chapters during the reporting period. Works under preparation or papers submitted for publication must not be considered in the award of merit increments for the year in question. Refereed contributions that have been accepted for publication, but have not yet appeared, will be considered if the Chair has proof of acceptance.

Other evidence of continued research activity is provided by the individual's participation in national and international conferences and workshops and the presentation of papers at these venues.

Invitations to present seminars and colloquia at other universities and talks at national and international conferences may also be recognized as evidence of merit and leadership in the chosen area of research.

Award of a sustained research grant from a peer-adjudicated body is to be accepted as peer recognition of the value of research carried out by the individual.

C. Teaching

Courses taught and the teaching load and effectiveness as a teacher must be considered in the award of the merit increment. Where the Department Chair makes the case for meritorious performance based on effectiveness as a teacher, documentation of multifaceted evaluation of teaching effectiveness must be provided, including USRIs, students' comments, peer evaluation, curriculum development, etc.

D. Service

The service of the individual to the community at large, academic, university and international community will also be considered. Where this service has been of exceptional merit, proper documentation will be provided by the Chair.

Peer recognition through, for example, election to scholarly societies, national/international committees, grant selection committees of peer-reviewed agencies such as NSERC, CIHR or SSHRC, or award of Prizes, Fellowships or Scholarships, or any form of award in recognition of the quality of research or service will be given consideration in the award of the merit increment.

E. Sabbaticals

In a faculty member's application for a sabbatical leave, they are required to describe the activities that will be undertaken during the leave and the scholarly outcomes that the activities are expected to generate. If the sabbatical is granted, the staff member shall submit a sabbatical report after the leave has finished, describing the actual activities undertaken and outcomes accomplished. The sabbatical leave application and the sabbatical report shall be submitted as part of the staff member's Annual Report to FEC for the reporting period under consideration (Article A4.03.9) These two documents are as important as the annual report itself in determining the merit of a reporting period containing a sabbatical leave. The staff member is expected to have executed the activities described in the sabbatical application, or the deviations from those activities that were explicitly approved in advance by the Dean, and to have accomplished outcomes commensurate in merit with those described in the application.

If the sabbatical leave occupies only part of the reporting period the normal expectations and criteria for research, teaching, and service are applicable to the portion of the period for which the staff member was not on leave.

5. Tenure

Tenure is not the right of a staff member on completion of the probationary period but must be earned through effectiveness and competence in the three areas outlined in the Criteria Section above. The individual must have produced sustained high-quality research and demonstrated continued effectiveness as a teacher during their career. There must be a high

probability of eventually reaching scholarly standards and maturity expected of a Professor of Science.

The service component of the candidate's career will not be a major issue in granting tenure, but the candidate must have demonstrated that they are capable of contributing effectively to service activities. Willingness to participate in the committee structure within the Department will be considered an asset. The candidate is expected to contribute to the overall welfare of the department. It is not expected that an untenured staff member will participate in the Faculty or the University committee structure, beyond their participation to their Department Council and Faculty Council.

As the granting of tenure commits the University for the rest of the individual's academic career, the decision must be made on the basis of substantial evidence. The full duration of the probationary period to the date of consideration will be utilized to assess the past performance and the future promise of the individual. Tenure before the expiry of the probationary period (early tenure) must be limited to cases of outstanding performance during the individual's career at the University. Typically, early tenure is considered for candidates with prior academic, government or industrial service.

Faculty who have taken one or more leaves during their probationary appointment and who believe the length and nature of the leave(s) materially affected the performance for which they will be assessed may request an extension of one or more years, subject to approval by the Provost and recommendation by the Dean (A5.02.4–7). In the case of faculty who did not take any leave(s) during the probationary period, a one-year extension to the second probationary period will only be granted when there is significant evidence that the individual will meet the criteria for tenure by the end of the extension year.

A. Evaluation

The individual is expected to take an active part in research, as evidenced by research publications in refereed venues of international repute, active participation in national/international conferences or the authorship of books or book chapters. The research productivity must be sustained and steady. An individual with a poor research record will not be granted tenure.

Teaching is to be evaluated as described in Section 3.B above (on "Evaluation Criteria" for "Teaching Activity") and, in addition, on the basis of a one-page statement by the staff member on their teaching philosophy and experience.

It is the responsibility of the Department Chair to provide a carefully documented case of the quality of the individual's teaching using these criteria as a guide. An individual with poor teaching/mentoring effectiveness will not be granted tenure.

It is expected that the service aspect of an Assistant Professor's duties will be kept to a minimum to enable them to establish an effective research and teaching program. Willingness to participate in the service functions of the Department would be considered an asset.

The Chair of the Department is responsible for providing complete documentation on the individual's whole academic career at the University, including the publication record, grants/contracts, teaching competence, research supervised and administrative service as detailed in Sections I and II of this document.

Confidential letters of reference from authorities in the field of research must be sought to ascertain the quality of research and future promise. The opinion of knowledgeable tenured colleagues within the Department may also be sought regarding the individual's competence and contributions. Evidence from both students and peers (testifying to the individual's teaching effectiveness) may also be provided. Finally, information about the individual's engagement in some of the necessary functions, both academic and administrative, within the Department may be provided.

6. Promotion

A. Promotion from Associate Professor to Professor

Promotion to the rank of Professor is based on the individual's performance in the three areas outlined in Section 2 above (on "Criteria"). Promotion is neither automatic nor based on the number of years of service. In considering promotion, the individual's whole record of achievement, to the date of consideration, in each of the three areas is to be scrutinized.

No particular numerical weight or formula can be attached to any of the three areas. For promotion to professor, the staff member must demonstrate a strong record of achievement in research, teaching and service, including excellence in research and/or teaching and/or exceptional service.

B. Promotion Based on Excellence in Research and/or Teaching

1. Criteria

The individual must demonstrate excellence or strength in research through high-quality and mature scholarship as evidenced by international recognition of research contributions.

The individual must demonstrate effectiveness in teaching at all levels, both in the classroom and through mentoring of trainees, as documented via multifaceted evaluation methods.

The individual must have contributed significant service to the Department, the University and/or professional organizations on the national and international level.

2. Evaluation

The evaluation of the quality of research and teaching will be done according to Sections 2.A and 3.A above. In promotion to the rank of Professor, confidential letters of reference must be obtained from international experts in the field testifying to the quality of the individual's

research and their national/international stature. Opinions of knowledgeable colleagues (i.e. Professors) within the Department should also be sought and, where appropriate, from colleagues in other departments.

Evidence of teaching effectiveness must be based on information from both students and peers. For the evaluation of the faculty member's effectiveness in teaching see Sections 2.B and 3.B. The individual must include in the promotion submission a one-page statement describing their teaching achievements.

By this stage of the individual's career, significant service to the professional community at the national/international level should be demonstrated.

The individual should have participated in the committee structure within the Department, and/or the Faculty and/or the University.

C. Promotion Based on Service

1. Criteria

Promotion to full professor based on exceptional service is reserved for those rare cases where an individual's service activity has required significant continuous time commitment resulting in a substantial reduction in time available for research and teaching for an extended period. The service provided by the individual during this period must have been exceptional in its quality and resulted in significant positive impact, and the individual must have demonstrated strong leadership at a senior level.

The individual's record of scholarly achievement must demonstrate high quality research, mature scholarship, and competence in teaching and mentoring at all levels.

2. Evaluation

The evaluation of the quality of research and scholarship will be done according to Sections 2.A and 3.A, above. In promotion to the rank of Professor, confidential letters of reference must be obtained from international experts in the field testifying to the quality of the individual's research and their national/international stature. Opinions of knowledgeable colleagues (i.e. Professors) within the Department should also be sought and, where appropriate, from colleagues in other departments.

Unlike the evaluation of research when promotion is justified on the basis of "excellence in research and/or teaching", this evaluation may focus on the individual's research and scholarship prior to beginning the extraordinary service, which should be judged in comparison to peers at that career stage and not at the time they were promoted to Professor.

Evidence of teaching effectiveness must be based on information from both students and peers. For the evaluation of the faculty member's effectiveness in teaching see Sections 2.B and 3.B above. The individual must include in the promotion submission a one-page statement describing their teaching achievements. Unlike the evaluation of teaching when promotion is

justified on the basis of “excellence in research and/or teaching”, this evaluation may focus on the individual’s teaching and mentoring prior to beginning the extraordinary service.

Opinions will be obtained through confidential letters of reference from individuals who are best qualified to judge the demanding nature of the service, the exceptional quality of the service performed by the individual, and the leadership demonstrated by the individual.