

The following motion was passed at Faculty Senate meeting #227 on November 6, 2017.

MOTION:

The UAF Faculty Senate moves to approve the Unit Criteria for Faculty of Natural Science in the College of Natural Science and Mathematics.

Effective: Fall 2018
Upon Chancellor Approval

Rationale: The Unit Criteria Committee assessed the unit criteria submitted by Natural Science Faculty in the College of Natural Sciences and Mathematics. These revisions implement revisions intended to be approved in the previous unit criteria but were omitted due to oversight.



President, UAF Faculty Senate

The Chancellor: Approves Disapproves



Chancellor

Date: 11/13/17

See the attached Unit Criteria:

**UAF REGULATIONS FOR THE APPOINTMENT AND EVALUATIONS OF FACULTY
AND *NATURAL SCIENCE* UNIT CRITERIA, STANDARDS, AND INDICES**

THE FOLLOWING IS AN ADAPTATION OF UAF AND BOARD OF REGENTS' CRITERIA FOR ANNUAL REVIEW, PRE-TENURE REVIEW, POST-TENURE REVIEW, PROMOTION, AND TENURE, SPECIFICALLY ADAPTED FOR USE IN EVALUATING THE FACULTY OF NATURAL SCIENCE IN THE COLLEGE OF NATURAL SCIENCES AND MATHEMATICS. ITEMS IN BOLDFACE ITALICS ARE THOSE SPECIFICALLY ADDED OR EMPHASIZED BECAUSE OF THEIR RELEVANCE TO THE DEPARTMENT'S/S' FACULTY, AND BECAUSE THEY ARE ADDITIONS TO UAF REGULATIONS.

The CNSM Mathematics and Statistics Unit Criteria are submitted as a separate document.

CHAPTER I

Purview

The University of Alaska Fairbanks document, "Faculty Appointment and Evaluation Policies," supplements the Board of Regents (BOR) policies and describes the purpose, conditions, eligibility, and other specifications relating to the evaluation of faculty at the University of Alaska Fairbanks (UAF). Contained herein are regulations and procedures to guide the evaluation processes and to identify the bodies of review appropriate for the university.

The university, through the UAF Faculty Senate, may change or amend these regulations and procedures from time to time and will provide adequate notice in making changes and amendments.

These regulations shall apply to all of the units within the University of Alaska Fairbanks, except in so far as extant collective bargaining agreements apply otherwise.

The provost is responsible for coordination and implementation of matters relating to procedures stated herein.

CHAPTER II

Initial Appointment of Faculty

A. Criteria for Initial Appointment

Minimum degree, experience and performance requirements are set forth in “UAF Faculty Appointment and Evaluation Policies,” Chapter IV. Exceptions to these requirements for initial placement in academic rank or special academic rank positions shall be submitted to the chancellor or chancellor’s designee for approval prior to a final selection decision.

B. Academic Titles

Academic titles must reflect the discipline in which the faculty are appointed.

C. Process for Appointment of Faculty with Academic Rank

Deans of schools and colleges, and directors when appropriate, in conjunction with the faculty in a unit, shall observe procedures for advertisement, review, and selection of candidates to fill any vacant faculty position. These procedures are set by UAF Human Resources and the Campus Diversity and Compliance (AA/EEO) office and shall provide for participation in hiring by faculty and administrators as a unit.

D. Process for Appointment of Faculty with Special Academic Rank

Deans and/or directors, in conjunction with the faculty in a unit, shall establish procedures for advertisement, review, and selection of candidates to fill any faculty positions as they become available. Such procedures shall be consistent with the university’s stated AA/EEO policies and shall provide for participation in hiring by faculty and administrators in the unit.

E. Following the Selection Process

The dean or director shall appoint the new faculty member and advise him/her of the conditions, benefits, and obligations of the position. If the appointment is to be at the professor level, the dean/director must first obtain the concurrence of the chancellor or chancellor’s designee.

F. Letter of Appointment

The initial letter of appointment shall specify the nature of the assignment, the percentage emphasis that is to be placed on each of the parts of the faculty responsibility, mandatory year of tenure review, and any special conditions relating to the appointment.

This letter of appointment establishes the nature of the position and, while the percentage of emphasis for each part may vary with each workload distribution as

specified in the annual workload agreement document, the part(s) defining the position may not.

CHAPTER III

Periodic Evaluation of Faculty

It is expected that the criteria for assistant professor are to be met for the fourth year comprehensive review. For promotion to and tenure as associate professor, an assistant professor has to meet the criteria at the associate level. For promotion to full professor an associate professor has to meet the criteria for full professor. Criteria for associate and full professor include an assumption that criteria at the previous level(s) continue to be met. Listed examples are not meant to imply that all of those provided are equally meritorious. Workloads vary between faculty members in their relative emphasis in the tripartite areas. Therefore expected amount of activity in teaching, research and service should be considered in the context of the faculty member's workload.

A. General Criteria

Criteria as outlined in “UAF Faculty Appointment and Evaluation Policies,” Chapter IV, *and Natural Sciences Unit Criteria, Standards, and Indices*, evaluators may consider, but shall not be limited to, whichever of the following are appropriate to the faculty member's professional obligation: mastery of subject matter; effectiveness in teaching; achievement in research, scholarly, and creative activity; effectiveness of public service; effectiveness of university service; demonstration of professional development and quality of total contribution to the university. *Tripartite faculty applying for tenure and/or promotion are strongly encouraged to give a seminar on their research to their peers before the peer-unit committee meets in that year to aid in these considerations.*

For purposes of evaluation at UAF, the total contribution to the university and activity in the areas outlined above will be defined by relevant activity and demonstrated competence from the following areas: 1) effectiveness in teaching; 2) achievement in scholarly activity; and 3) effectiveness of service.

Bipartite Faculty

Bipartite faculty are regular academic rank faculty who fill positions that are designated as performing two of the three parts of the university's tripartite responsibility.

The dean or director of the relevant college/school shall determine which of the criteria defined above apply to these faculty.

Bipartite faculty may voluntarily engage in a tripartite function, but they will not be required to do so as a condition for evaluation, promotion, or tenure.

B. Criteria for Instruction

A central function of the university is instruction of students in formal courses and supervised study. Teaching includes those activities directly related to the formal and informal transmission of appropriate skills and knowledge to students. The nature of instruction will vary for each faculty member, depending upon workload distribution and the particular teaching mission of the unit. Instruction includes actual contact in classroom, correspondence or electronic delivery methods, laboratory or field and preparatory activities, such as preparing for lectures, setting up demonstrations, and preparing for laboratory experiments, as well as individual/independent study, tutorial sessions, evaluations, correcting papers, and determining grades. Other aspects of teaching and instruction extend to undergraduate and graduate academic advising and counseling, training graduate students and serving on their graduate committees, particularly as their major advisor, curriculum development, and academic recruiting and retention activities.

1. Effectiveness in Teaching

Evidence of excellence in teaching may be demonstrated through, but not limited to, evidence of the various characteristics that define effective teachers. *When evaluating the quality of the teaching, consideration should be given to the nature of the course (e.g., core, number of students, writing intensive, student demographics, etc.).* Effective teachers *will demonstrate some, but not necessarily all, of the following characteristics in an individual year:*

- a. are highly organized, plan carefully, use class time efficiently, have clear objectives, have high expectations for students;
- b. express positive regard for students, develop good rapport with students, show interest/enthusiasm for the subject;
- c. emphasize and encourage student participation, ask questions, frequently monitor student participation for student learning and teacher effectiveness, are sensitive to student diversity;
- d. emphasize regular feedback to students and reward student learning success;
- e. demonstrate content mastery, discuss current information and divergent points of view, relate topics to other disciplines, deliver material at the appropriate level;
- f. regularly develop new courses, workshops and seminars and use a variety of methods of instructional delivery and instructional design;

- g. may receive prizes and awards for excellence in teaching.

2. Components of Evaluation

Effectiveness in teaching will be evaluated through information on formal and informal teaching, course and curriculum material, recruiting and advising, training/guiding graduate students, etc., provided by:

- a. systematic student ratings, i.e. student opinion of instruction summary forms,

and at least two of the following:

- b. narrative self-evaluation,
c. peer/department chair classroom observation(s),
d. peer/department chair evaluation of course materials.

Specific Sciences criteria for teaching performance:

- ***Assistant Professor:*** *Evidence of teaching ability and a commitment to a quality and current teaching program in the department. University-sanctioned teaching evaluation scores should show that the majority of students rate courses favorably, and, if not, there should be a definite upward trend showing improvement in scores over time. Course materials such as syllabi, exams, projects and homework should reflect the course description and be contemporary. The faculty should provide evidence for active support of student research at the undergraduate and/or graduate level.*
- ***Associate Professor:*** *The record must show that the teaching material is contemporary and relevant and that the presentations stimulate the learning process. Evidence of the expected quality of instructional performance may include - but is not limited to - course and/or curriculum development, novel approaches to instruction, versatility in instructional assignments, effective guiding and mentoring of individual students, or high quality University-sanctioned teaching evaluation scores or other teaching evaluations (e.g. peer-evaluation). Chair and/or peer evaluations should provide evidence of effective classroom instruction and student engagement. The record must also show active and successful mentorship in research at the undergraduate and/or graduate level. Such mentorship can include membership on graduate advisory committees.*

- ***Professor: Significant contributions to the instructional program are expected. These contributions may include major improvements in course and curriculum offerings, securing funds to enhance instructional and/or laboratory settings, leadership in departmental level curriculum core revisions, student learning outcome assessments, student advising, and mentoring of graduate students to the completion of their degree. The faculty must show a consistent record of high quality teaching.***

C. Criteria for Research, Scholarly, and Creative Activity

Inquiry and originality are central functions of a land grant/sea grant/space grant university and all faculty with a research component in their assignment must remain active as scholars. Consequently, faculty are expected to conduct research or engage in other scholarly or creative pursuits that are appropriate to the mission of their unit, and equally important, results of their work must be disseminated through media appropriate to their discipline. Furthermore, it is important to emphasize the distinction between routine production and creative excellence as evaluated by an individual's peers at the University of Alaska and elsewhere.

1. Achievement in Research, Scholarly and Creative Activity

Whatever the contribution, research, scholarly or creative activities must have one or more of the following characteristics:

- a. They must occur in a public forum.
- b. They must be evaluated by appropriate peers.
- c. They must be evaluated by peers external to this institution so as to allow an objective judgment.
- d. They must be judged to make a contribution.

2. Components of Research, Scholarly and Creative Activity

Evidence of excellence in research, scholarly, and creative activity may be demonstrated through, but not limited to:

- a. Books, reviews, monographs, bulletins, articles, proceedings and other scholarly works published by reputable journals, scholarly presses, and publishing houses that accept works only after rigorous review and approval by peers in the discipline.
- b. Competitive grants and contracts to finance the development of ideas, these grants and contracts being subject to rigorous peer review and approval.

- c. Presentation of research papers before learned societies that accept papers only after rigorous review and approval by peers.
- d. Exhibitions of art work at galleries, selection for these exhibitions being based on rigorous review and approval by juries, recognized artists, or critics.
- e. Performances in recitals or productions, selection for these performances being based on stringent auditions and approval by appropriate judges.
- f. Scholarly reviews of publications, art works and performance of the candidate.
- g. Citations of research in scholarly publications.
- h. Published abstracts of research papers.
- i. Reprints or quotations of publications, reproductions of art works, and descriptions of interpretations in the performing arts, these materials appearing in reputable works of the discipline.
- j. Prizes and awards for excellence of scholarship.
- k. Awards of special fellowships for research or artistic activities or selection of tours of duty at special institutes for advanced study.
- l. Development of processes or instruments useful in solving problems, such as computer programs and systems for the processing of data, genetic plant and animal material, and where appropriate obtaining patents and/or copyrights for said development.
- m. Invitation to edit or referee articles or proposals for professional journals or organizations can be taken as evidence of obtaining stature from colleagues.***
- n. Translational research efforts as evidenced by commercial activity, industrial partnerships, invention disclosures, patents, and licensing.***

Specific Criteria for Science research performance:

- ***Assistant Professor: Evidence of the ability to establish a viable research program in the area of specialization, normally a sub-discipline of the***

natural sciences (with the option of research in science education). This should include several of the following:

- Recruiting and mentoring graduate and/or undergraduate research students*
- Peer-reviewed publications from research performed at least in part during their current appointment*
- Proposals that were either funded or received favorable reviews.*
- Acquiring data that promises to result in publications*
- Establishing a professional reputation that demonstrates visibility in the scientific community*
- Presentations such as talks or poster presentations at scientific meetings*

➤ ***Associate Professor:** Must have established an appropriate research program. The faculty member should show independence and leadership by generating research ideas that translate into projects that involve graduate students and may also include undergraduate students. Examples for such a successful research program should include several of the following:*

- Publications in refereed professional journals demonstrating significant scientific contributions as measured by standard indices (e.g. publication rate, citation rates, journal impact factor). It is important for the faculty member to discuss the importance of their scientific contributions clearly in the narrative.*
- Publication of discipline-relevant data and metadata, contribution to cyber structure, or contributing to publicly available computer models*
- Presentation of research results at professional meetings*
- Leadership in preparation and submission of research proposals*
- Acquisition of external research funding*
- Successful mentoring of graduate students in the faculty member's field of expertise, which can be demonstrated by student graduation, student presentations and publications, student awards or grant success, professional placement of students after graduation.*

➤ ***Professor:** Must have established an internationally recognized research program. The faculty member should show independence and leadership in research by having produced a sufficient quality and quantity of publications to demonstrate the existence of an on-going, professional research program. The program's recognition and*

independence is also demonstrated through acquisition of external funding, as appropriate for the discipline. There should be a record of student involvement including successful mentoring of graduate students. The research program should demonstrate:

- Evidence of an international reputation that should include several examples of the following: professional activities or presentations at meetings, citations of publications, documented opinions of other scientists in the field, invited talks, book chapters, professional awards, and invitations to serve on steering committees, review panels, and working groups.***
- Evidence of an on-going, professional, independent research program that should include examples of the following: publication quality and quantity indicated by the number of citations, the quality of the journals as indicated by their impact factor, and/or external reviews stating the papers made major contributions. The faculty members acquisition of external funding should be described, including a description of the faculty member's contribution to collaborative projects.***
- Evidence of mentoring of graduate students that should include several examples of the following: student graduation, a significant body of student presentations, student awards, or student grant successes, and professional placement of students. Inclusion of undergraduate students in research programs is also valued and mentoring of undergraduate students should be demonstrated if they are included in the research program.***

As a point of clarification, there is no expectation for faculty at any rank to amass publications as either first or sole author. It is common for many disciplines to have the primary author listed last (often as corresponding author), and it is considered favorable for students to be included as coauthors or first authors. It is essential for the faculty member to clarify in their narrative their role and creative contributions in multiple-authored publications. This philosophy of explaining the role also applies to collaborative proposals.

D. Criteria for Public and University Service and Professional Service

Public service is intrinsic to the land grant/sea grant/space grant tradition, and is a fundamental part of the university's obligation to the people of its state. In this tradition, faculty providing their professional expertise for the benefit of the university's external constituency, free of charge, is identified as "public service." The tradition of the university itself provides that its faculty assumes a collegial obligation for the internal functioning of the institution; such service is identified as "university service."

1. Public Service

Public service is the application of teaching, research, and other scholarly and creative activity to constituencies outside the University of Alaska Fairbanks. It includes all activities which extend the faculty member's professional, academic, or leadership competence to these constituencies. It can be instructional, collaborative, or consultative in nature and is related to the faculty member's discipline or other publicly recognized expertise. Public service may be systematic activity that involves planning with clientele and delivery of information on a continuing, programmatic basis. It may also be informal, individual, professional contributions to the community or to one's discipline, or other activities in furtherance of the goals and mission of the university and its units. Such service may occur on a periodic or limited-term basis. Examples include, but are not limited to:

- a. Providing information services to adults or youth.
- b. Service on or to government or public committees.
- c. Service on accrediting bodies.
- d. Active participation in professional organizations.
- e. Active participation in discipline-oriented service organizations.
- f. Consulting, including clinical consulting in a faculty member's area of expertise.*
- g. Prizes and awards for excellence in public service.
- h. Leadership of or presentations at workshops, conferences, or public meetings.
- i. Training and facilitating.
- j. Radio and TV programs, *contributions including interviews*, newspaper articles and columns, publications, newsletters, films, computer applications, teleconferences and other educational media.
- k. Judging and similar educational assistance at science fairs, state fairs, and speech, drama, literary, and similar competitions.

2. University Service

University service includes those activities involving faculty members in the governance, administration, and other internal affairs of the university, its colleges, schools, and institutes. It includes non-instructional work with students and their organizations. Examples of such activity include, but are not limited to:

- a. Service on university, college, school, institute, or departmental committees or governing bodies.
- b. Consultative work in support of university functions, such as expert assistance for specific projects.
- c. Service as department chair or term-limited and part-time assignment as assistant/associate dean in a college/school.
- d. Participation in accreditation reviews.
- e. Service on collective bargaining unit committees or elected office.
- f. Service in support of student organizations and activities.
- g. Academic support services such as library and museum programs.
- h. Assisting other faculty or units with curriculum planning and delivery of instruction, such as serving as guest lecturer.
- i. Mentoring *including serving as new faculty mentors*.
- j. Prizes and awards for excellence in university service.
- k. *Serving on committees that represent the University at other professional institutions.*

3. Professional Service

- a. Editing or refereeing articles or proposals for professional journals or organizations (*if not counted as research; see C.2.F.*).
- b. Active participation in professional organizations.
- c. Active participation in discipline-oriented service organizations.
- d. Committee chair or officer of professional organizations.
- e. Organizer, session organizer, or moderator for professional meetings.

- f. Service on a national or international review panel or committee.
- g. *Serving as a mentor/advisor, committee member or external examiner for students at other institutions.*

4. Evaluation of Service

Each individual faculty member's proportionate responsibility in service shall be reflected in annual workload agreements. In formulating criteria, standards and indices for evaluation, promotion, and tenure, individual units should include examples of service activities and measures for evaluation appropriate for that unit. Excellence in public, university, **and professional** service may be demonstrated through, e.g., appropriate letters of commendation, recommendation, and/or appreciation, certificates and awards and other public means of recognition for services rendered.

Measures of effectiveness of service performance include (but are not limited to):

- o *Accomplishments of the effort of organization to which service was provided.*
- o *Official recognition of quality of service (e.g., awards, letters of recommendation).*
- o *Opinions of clients served and/or colleagues involved in delivery of service.*

Specific criteria for service performance:

- **Assistant Professor:** *None in addition to UAF criteria.*
- **Associate Professor:** *Positive contribution to departmental and/or university matters, effective professional contributions to the public, and/or effective service to the profession are expected.*
- **Professor:** *Evidence of leadership in the service area is mandatory. Significant contributions to the development of departmental or university programs are expected. Service to the general public or Alaskan teachers is expected.*

E. Criteria for Curation as a service component when relevant.

Curators at the University of Alaska Museum (UAM) can hold a tenure-track faculty position. Rank and tenure are held within departments at UAF, and Curators are thus treated as joint appointments between a department and UAM. As is the case for all tenure-track faculty at CNSM, Curator's performances are evaluated on the basis of their activities in teaching, research, and service.

1. Curation involves the management and development of a formally recognized University collection that exists to serve as a research resource for students and researchers at university, state, national, and international levels. Examples of curatorial activities include, but are not limited to:

- a. Maintaining, enhancing, and enlarging the collection (includes computerization and database development, archival upgrades, specimen conservation and identification, and adding specimens or objects to existing collection);***
- b. Interacting with state and federal agencies and with the public on collections-related issues;***
- c. Facilitating collections use through loans, exchanges, and visiting researchers;***
- d. Maintaining appropriate permits (as needed for the collections);***
- e. Supervising collections managers, student employees, and volunteers;***
- f. Working with public program staff to create exhibits and educational activities appropriate to the collection;***
- g. Pursuing funding for collections growth and maintenance;***
- h. Producing curatorial or collections-related publications, reports, and/or manuals;***
- i. Ensuring university compliance with state and federal laws and international treaties and agreements that pertain to the collection.***

2. Specific criteria for curatorial performance:

Assistant Professor and Curator

Evidence of curatorial ability and a commitment to developing and managing research collections relevant to the area of specialization includes the following:

- a. Curators will develop the collections as a permanent record of the natural and/or cultural diversity of Alaska, the Circumpolar North, and beyond and as a research resource for studies of biological and/or cultural diversity.***
- b. Collections care includes responsibility for the physical condition and storage of objects/specimens, corresponding documentation, budgetary management, and annual reports.***
 - 1. Curators will preserve the specimens, artifacts, objects, and material under their purview through the use of methods and techniques professionally accepted within their respective disciplines.***
 - 2. Curators will ensure that all records and field notes concerning collection materials are maintained in a secure fashion and meet or exceed documentation standards for their respective discipline.***
 - 3. Curators will maintain current accession files, deaccession files, and catalogues of objects in their collections. They will develop electronic databases with computer data formats that follow data standards of the respective discipline and UAM.***
 - 4. Curators will develop, maintain, and revise written policies and procedures for curation of objects or specimens in their collections.***
- c. Curators will take part in interpretive activities of the Museum in order to fulfill the Museum's mission to interpret the natural and cultural history of Alaska. In this regard, preparation of a small exhibit is approximately the equivalent of publication of a professional article; project direction of a large and complex exhibit that includes preparation of a serious catalogue is approximately the equivalent of publication of a scholarly book.***
- d. Curators will actively submit grant applications for external support for their curatorial activities and collections-based research.***

Associate Professor and Curator

Consistent contributions to interpretive (education and exhibition) activities of the Museum, response to collection-related inquiries (from other professionals, the public, and state agencies) and/or development of interpretive materials for the public-at-large are expected. Use of the collections for teaching and/or research must be evident.

Active solicitation for external funds to support curatorial activities and collections-based research must be evident.

Professor and Curator

Significant development of the collections under the Curator's care is expected. This development includes sustained growth of the collections as research resources and as a means of fulfilling the Museum's mission of acquiring, preserving in perpetuity, investigating, and interpreting objects and specimens relating to the natural and or cultural history of Alaska and the Circumpolar North. Significance of collections will be measured in terms of research significance, value to University of Alaska research and instructional programs, and value to national and international research programs. The Curator should be a recognized authority in his/her field, locally and nationally. He or she must have a record of success in acquiring external funds for curatorial activities and collections-based research.

3. Evaluation of Curation

A committee composed of the tenured curators at the museum will provide an evaluation to the unit peer committee. In case there is just one or no tenured curators, it is imperative that two of the external reviewers be curators. In formulating criteria, standards, and indices for evaluation, promotion, and tenure, the Museum should include examples of curatorial activities and measures for evaluation appropriate for that unit. Excellence in curation may be demonstrated through, e.g., appropriate letter of commendation, recommendation, and/or appreciation, certificates and awards, and other public means of recognition for services rendered.