

Smead Aerospace Engineering Sciences Department CRPT

Primary Unit Criteria for Comprehensive Review, Promotion, and Tenure

Smead Aerospace Engineering Sciences Department
College of Engineering and Applied Science
University of Colorado Boulder

Date of approval: 08/30/2023 (department) 8/31/2023 (CEAS Dean)

Effective Academic Years: 2023-2028

1	Scope.....	3
2	Rules of the Regents.....	3
3	Departmental policies and procedures	4
3.1	Guiding Principles	4
3.2	Guidance to Faculty Candidate for Preparation of Materials	4
3.2.1	Curriculum Vitae	4
3.2.2	Creative/Scholarly Work Statement	5
3.2.3	Teaching Statement	6
3.2.4	Teaching Quality Framework (TQF) Evaluation Summary	6
3.2.5	Leadership and Service Statement	6
3.2.6	List of Recommended External Reviewers.....	7
3.3	Departmental Process to Prepare the Case	7
3.3.1	Primary Unit Evaluation Committee (PUEC) and Voting Eligibility	7
3.3.2	Faculty Member Responsibilities	8
3.3.3	Mentoring Committee Responsibilities	8
3.3.4	Primary Unit Evaluation Committee Tasks and Report	9
3.3.5	Primary Unit Review of Dossier	10
3.3.6	Chair's Report of the Primary Unit Evaluation and Recommendation	10
4	Conflict of Interest.....	11
5	Criteria	11
5.1	Evaluation of Scholarly/Creative Work	11
5.1.1	General Guidance	11
5.1.2	AES Review of Conference Papers	13
5.1.3	Reappointment Guidance	13
5.1.4	Promotion to Associate Professor with Tenure Guidance	13
5.1.5	Promotion to Full Professor Guidance.....	14
5.2	Evaluation of Teaching	14
5.2.1	General Guidance	14
5.2.2	Reappointment Guidance	15

Smead Aerospace Engineering Sciences Department CRPT

5.2.3	Promotion to Associate Professor with Tenure Guidance.....	15
5.2.4	Promotion to Full Professor Guidance.....	16
5.3	Evaluation of Leadership and Service	16
5.3.1	General Guidance	16
5.3.2	Reappointment Guidance	17
5.3.3	Promotion to Associate Professor with Tenure Guidance.....	17
5.3.4	Promotion to Full Professor Guidance.....	17

Smead Aerospace Engineering Sciences Department CRPT

1 Scope

This document describes the procedures, policies, and criteria for specific use by the Department of Aerospace Engineering Sciences in evaluating tenure-track faculty for reappointment, tenure, and promotion. Primary units develop criteria that define the teaching, scholarly/creative work, and leadership and service expectations for faculty ([Regent Policy §5.D.3.A](#)), and this statement fulfills the Departmental obligation to produce such criteria as found in University of Colorado [Administrative Policy Statement 1022 \(APS1022\)](#) §V.A. as revised 7-1-2020. Further, this statement complies with the relevant requirements for this type of statement as contained in Regent Policy (§5.D.3) and in APS 1022 (§V).

2 Rules of the Regents

Rules of the Regents, including Regent Policy §5.D.3, define the basic requirements for reappointment, tenure, and promotion. These basic requirements cannot be overridden or superseded by department rules or interpretations.

The university standard states that tenure may be awarded only to faculty members who have demonstrated, at a minimum, meritorious performance in each of the three areas of teaching, scholarly/creative work, and leadership and service (to the university, profession, and/or public); and who have demonstrated excellence in either teaching or scholarly/creative work (Regent Policy §5.D.3; APS 1022 §IV.A).

Each tenure-track faculty member is evaluated in a comprehensive manner at least once during the tenure probationary period apart from the review for the award of tenure. The comprehensive review typically occurs during the fourth year of full-time service and focuses on whether the candidate is making normal progress toward achieving the above standard (Regent Policy §5.D.3).

To be promoted to the rank of Professor (also referred to as “Full Professor”), an individual should typically have the terminal degree appropriate to their field or its equivalent, and a record that: (1) Taken as a whole, may be judged to be excellent; (2) Demonstrates significant contribution to graduate and undergraduate education, unless individual or departmental circumstances can be shown to require a stronger emphasis, or singular focus, on one or the other; and (3) Since receiving tenure or promotion to Associate Professor indicates substantial, significant, and continued growth, development, and accomplishment in teaching, scholarly/creative work, and leadership and service (Regent Policy §5.D.3).

The purpose of this policy statement is to apply these general standards of performance in teaching, creative/scholarly work (previously called research), and leadership and service to the fields that are represented within the Department of Aerospace Engineering Sciences (Regent Policy §5.D.3.A). The term research is still used in this document and is synonymous with creative/scholarly work.

Smead Aerospace Engineering Sciences Department CRPT

In case of conflict, the rules of the College of Engineering and Applied Sciences and/or the University of Colorado Regents supersede this department policy.

3 Departmental policies and procedures

This section describes the policies and procedures followed by the Department during its portion of review for reappointment, promotion, and tenure (first-level review, part 1). After the Department's review, a candidate's file is reviewed by the college (first-level review, part 2), the campus (second-level review), and finally by the President and Regents (third-level review). The Chancellor makes the final decision on cases involving reappointment and promotion to full professor. The Regents make the final decision on cases involving tenure. The policies and procedures for first-level review by the College of Engineering and Applied Science are available on the college's website (<http://www.colorado.edu/engineering>). The policies and procedures for the campus level of review are available from the Office of Faculty Affairs (<http://www.colorado.edu/facultyaffairs> or <https://www.colorado.edu/engineering-facultystaff/rules-policies>).

3.1 Guiding Principles

Reappointment, promotion, and tenure evaluations are holistic assessments of excellence in past scholarly and pedagogical achievements, and of productive service to our communities. In scholarly/creative work, we value research that advances the state of the art, supports the development of graduate student researchers, and leads to national and international recognition of the achievements. In teaching, we value effective teaching methodologies using inclusive practices that inspire life-long learning, including teaching practices that build technical competence and prepare students for professional careers in engineering and related fields. In leadership and service, we value the support of the department, college, and professional societies to create effective and inclusive administration of these units.

3.2 Guidance to Faculty Candidate for Preparation of Materials

3.2.1 Curriculum Vitae

The candidate's Curriculum Vitae or CV represents a cumulative record of their creative/scholarly work, teaching, and leadership and service achievements, and the version submitted should be formatted for ease of review during the personnel action being undertaken. Beyond the details specified in the college guidelines, the department specifies that scholarly contributions should be clearly divided into categories denoting different types, such as peer-reviewed conference papers, non-peer-reviewed conference papers and presentations, peer-reviewed journal articles, patents, or invited lectures and presentations.

Most CVs have sections dealing with:

Smead Aerospace Engineering Sciences Department CRPT

- Educational background
- Academic employment history
- Honors and awards
- Research and/or creative works
 - List publications that have been refereed in a separate section than those that have not been peer-reviewed. Include authors, year, article title, journal or proceedings name, volume, and inclusive page numbers. Written work in press or submitted but not yet accepted for publication should be clearly identified as such. The co-author information should designate who is a student or post-doc advised by the faculty.
 - Publications in conference proceedings should be distinguished as being peer-reviewed or not peer-reviewed. (Please see section IX on conference paper evaluations.)
 - List research funding proposals submitted, and their status as awarded, pending, or declined. Include agency, title, amount received, beginning and end dates, names of all co-investigators, candidate's role (Principal Investigator or Co-Principal Investigator), and **candidate's portion of the funding**. After reappointment review, only awarded proposals need to be listed but pending/declined proposals can optionally be included.
- Teaching accomplishments
 - List classes taught. Highlight if the candidate created a new course, revised a course, or if other educational changes were made to a course such as making it available in an online format.
 - List any textbooks, study guides, manuals, workbooks, or electronic media produced for student or class use.
 - List individual undergraduate and graduate students mentored. Include names, period mentored, and completion dates (with degrees or honors) of the students for whom the candidate served as primary mentor. If co-mentoring a student, indicate the level of mentoring involvement (i.e. 50-50 mutually agreed upon split by advisors, etc.)
- Leadership and Service activities. Service to professional organizations, government agencies, the department, college, and university should be detailed. Include outreach activities to the community undertaken on behalf of the University.

3.2.2 Creative/Scholarly Work Statement

This statement of typically 2-4 pages is an opportunity for the candidate to communicate research accomplishments to the reviewers, highlighting their major contributions, describing the impact of their research/creative work, and addressing any unique aspects of the scholarly record.

Smead Aerospace Engineering Sciences Department CRPT

The research statement should include a subsection labeled *Broader Impacts* that explicitly discusses the intellectual significance, impact, and depth of the candidate's research contributions.

Beyond discussing the research outcomes, the statement should include a discussion of the formation and administration of the candidate's research lab or group. How is the candidate successful in attracting highly qualified graduate researchers and integrating them into an inclusive work environment?

3.2.3 Teaching Statement

This narrative of typically 2-4 pages is an opportunity for the candidate to communicate teaching accomplishments to the reviewers, highlighting their major teaching activities, the innovative aspects of their teaching, and the successes and challenges in undergraduate and graduate training and individualized instruction, and addressing any unique aspects of the teaching record.

The candidate should summarize their teaching philosophy and teaching track record (both strengths and weaknesses) and explain how they have incorporated feedback and worked to improve their teaching and mentoring.

The candidate should include a specific section on *Coursework and Teaching* that links to the department's TQF criteria and provide any relevant context by which to interpret the associated data.

The candidate should discuss how they have worked to make their classroom teaching and mentoring activities inclusive and equitable.

3.2.4 Teaching Quality Framework (TQF) Evaluation Summary

The TQF summary form should be included in the material submitted by the candidate and should specify the sources of evidence to be used as part of the teaching evaluation. The department TQF form is a separate document that outlines the TQF-based teaching and mentoring evaluation process.

3.2.5 Leadership and Service Statement

The statement should describe the candidate's internal (department, college, and campus) and external (to the profession and to the public) leadership and service. Candidates should include leadership and service dates and the level of effort required when relevant.

This narrative of typically 1-2 pages is an opportunity for the candidate to speak directly to the review committee membership, highlighting their major contributions or activities

Smead Aerospace Engineering Sciences Department CRPT

in the areas of service or leadership to the University, to their profession, and to the public.

This statement should provide separate sections for CU Internal and external leadership and service.

The candidate should discuss if/how any of their leadership and service activities have been focused on making their profession more inclusive and equitable.

3.2.6 List of Recommended External Reviewers

The candidate may provide a list of three recommended external reviewers who can be *included*. Optionally, the candidate may also identify potential external reviewers requested to be excluded. The list should include professional scholars who can write authoritatively about the candidate's scholarly and professional service record, chosen to avoid any known or apparent biases, either positive or negative. The list should not include anyone with a conflict of interest in the case which, as defined by the college and university, includes PhD or postdoctoral mentoring relationships or close collaborators (typically indicated by status as co-authors or co-investigators on multiple peer-reviewed publications or grants in the past three years). The PUEC makes the final selection of external reviewers.

Letters must be requested from professional researchers and academics not affiliated with the University of Colorado who are well respected in a field close to that of the candidate. All letters received must be submitted with the dossier.

Individuals contacted but not able to review must also be listed, along with the reason for the declination. All contact with outside reviewers should be noted and fully documented in the dossier. All requests for information from external reviews must go through one representative from the primary unit.

External letters should be requested at least three months before the dossier is due in the Dean's office. The letter request will include the candidate's CV, research and teaching statements, sample research papers, and the department's promotion and tenure criteria document.

3.3 Departmental Process to Prepare the Case

3.3.1 Primary Unit Evaluation Committee (PUEC) and Voting Eligibility

All tenured department faculty are voting faculty and eligible to serve as members of the Primary Unit Evaluation Committee (PUEC) for the following cases: comprehensive review for feedback only or reappointment of Assistant Professors, promotion to Associate Professor, or a tenure case. All Full Professors in the department are the voting faculty and potential PUEC members in cases involving promotion to Full

Smead Aerospace Engineering Sciences Department CRPT

Professor. Each case must have a minimum voting membership of at least five eligible faculty members. If there are fewer than five eligible faculty members, a request to supplement the voting membership of the primary unit is to be submitted to the Dean for approval. The chair does not serve on the PUEC.

The PUEC shall assemble the candidate's dossier, which must contain at least the mandatory items described in the campus and college guidelines before sharing materials with the departmental members for vote and forwarding to the dean's review committee.

For tenure and promotion to associate or full professor cases, the PUEC will solicit confidential letters from at least six external reviewers. Given the significant academic labor involved for external reviewers in preparing letters, and that only six reviews are required, the number of reviewers solicited should be limited to a number that would likely result in six letters. During the process of identifying potential reviewers, the PUEC should review the list of potential reviewers suggested for inclusion or exclusion by the candidate. An equal or greater number of external reviews included in the final dossier should be selected by the PUEC.

3.3.2 Faculty Member Responsibilities

The faculty member under review is notified of the start of their review process the semester before the review and given a date by which time their materials are to be submitted to the chair. They are responsible for submitting and updating their CV, statements of scholarly/creative work, teaching, and leadership and service, and at least three example publications to their mentors and to the department chair by the requested date. A departmental faculty meeting is scheduled by the department to coincide with this submission, at which time the candidate is asked to present a research seminar to the faculty. The purpose of this seminar is to provide an opportunity for the candidate to share recent and significant work in depth with their colleagues in the department. It is not meant to be a comprehensive summary of all research projects they have undertaken nor a review of their teaching or service activities.

3.3.3 Mentoring Committee Responsibilities

Each untenured faculty member at the rank of assistant or associate professor is assigned two faculty mentors, both at a higher rank. Where possible, one mentor should work in a closely-related research area and the second should be somewhat more removed. The general role of the mentoring committee is to help their mentee navigate the tenure process by providing guidance on general expectations and periodically checking in on progress to review research activities, offer advice on committee selections, conduct classroom visits, etc. In terms of reappointment, promotion, and tenure, the mentoring committee is responsible for assisting the candidate in assembling their contributions to the dossier including the CV; statements of scholarly/creative work, teaching, and leadership and service; and example

Smead Aerospace Engineering Sciences Department CRPT

publications. The mentoring committee is also responsible for compiling an evaluation of the faculty member's teaching metrics and, if requested, providing suggestions to the PUEC chair for external reviewers.

3.3.4 Primary Unit Evaluation Committee Tasks and Report

Three faculty members from the Primary Unit Committee (PUC) are selected by the chair to serve as the Primary Unit Evaluation Committee (PUEC) for all promotion cases. One faculty is the PUEC chair and ensures consistency across the promotion cases. Two faculty members each cover either the leadership and service or teaching evaluations for each candidate. (If any of these three members has a conflict of interest with the candidate, they are not included in the PUEC for that individual and another member of the committee assumes their responsibilities.) A fourth PUEC member is chosen from the PUC who is not a faculty mentor of the candidate. This fourth member has expertise in the candidate's area of research and performs the research evaluation.

The department is responsible for requesting inputs from the faculty member and the mentoring committee in a timely manner to meet submission requirements specified by the Dean's office, assembling the dossier, soliciting opinions from outside reviewers, and providing a written and oral summary of the candidate's dossier to the full membership of the primary unit committee.

External letters are required for cases of Promotion and Tenure only, not for the comprehensive review for feedback only or reappointment. The selection of external reviewers is left to the PUEC with the following recommendations (see also section IV-12). The faculty member under review should be asked to provide only 3 recommendations. It is preferable for the reviewers selected to be primarily from a mix of universities in the U.S. or abroad who are highly regarded in the candidate's area of expertise. A description of the expertise of the reviewers should be included in the dossier. The reviewer descriptions will be collected by the department when the external letters are requested and will be included with the external letters. Professors should be at or above the rank being sought. Industry or governmental reviewers should have an equivalent level of seniority and degree. The primary external reviewers shall not be former academic advisors or supervisors of the faculty member. The PUEC submits the names and addresses of the external reviewers to the chair who formally makes the request per the CU guidelines appropriate for the review. The response from each reviewer is forwarded to the PUEC members.

Letters are solicited from students who have taken courses from the faculty member being evaluated, both on the undergraduate and graduate level, including current and former students. At least six such letters should be included. In AES this is done by sending an email request to all current students and alumni asking for their comments on faculty up for comprehensive review, promotion or tenure. Unsolicited comments from students submitted to the Chair, Dean or an advisor may also be included. Letters solicited from students and mentees should be anonymized prior to being shared with

Smead Aerospace Engineering Sciences Department CRPT

the full faculty of the primary unit and a copy of the solicitation template for each group will be included in the final dossier.

The PUEC report should include a description of the findings of the Committee with regard to (A) teaching performance, (B) scholarly and creative work, and (C) university and professional leadership, service and outreach. The primary unit report is expected to comment on the quality and significance of the reviewed papers or other research and creative work published by the candidate, and on the quality, reputation, and appropriateness of the publication venues selected by the candidate. The latter issue is particularly important when peer-reviewed conference proceedings are part of the candidate's record, as conference proceedings have become increasingly important in some fields and yet have wide variations in prestige, selectivity, paper length, and review processes. In addition to addressing these factors, the primary unit report should identify which of the candidate's proceedings papers (if any) are considered equivalent to journal papers in the field (see section 5.1.2).

The written report of the evaluation committee becomes part of the dossier. The names and affiliations of the external reviewers should not be revealed in these materials. The Chair should not serve on the PUEC or write its report (as the chair's recommendation is expressed in a separate report).

3.3.5 Primary Unit Review of Dossier

After the PUEC reports are complete, the department chair schedules a meeting where faculty eligible to vote in the personnel case discuss the candidate's record, per the unit's bylaws. After discussion, the faculty vote to issue a secret ballot and set a deadline for ballots to be received.

All faculty members who are eligible to vote on a particular case must be allowed to review the entire dossier before they are asked to vote on the case. The dossier should be posted at least 1 week prior to the vote.

Votes should be recorded in the categories of 'for' the proposed action, 'against' the proposed action, 'abstain' or 'excused absence'. An abstention is appropriate when a faculty member has reviewed all materials for an action but is unable to vote 'for' or 'against' that action, or if the faculty member has a conflict of interest with the candidate. Excused absences should be limited to faculty members who are on leave and unable to participate in the review and vote.

The Chair should not vote, but may be present during the discussion by the primary unit.

3.3.6 Chair's Report of the Primary Unit Evaluation and Recommendation

The chair's letter provides a summary of the faculty's discussion of the candidate's case and explicitly provides the chair's own evaluation and recommendation, which may agree or disagree with the PUEC letter and/or the primary unit faculty vote. Regardless

Smead Aerospace Engineering Sciences Department CRPT

of the assessment, the chair shall provide a detailed rationale for the recommendation. Both the chair's letter and the PUEC letter are meant to offer constructive feedback to a candidate, regardless of the type of assessment being made, and both shall be shared with the candidate when the case is forwarded to the Dean's Review Committee (the First Level Review Committee or FLRC).

The report or letter from the Chair to the Dean must not identify the external reviewers by name or in any other way. This report becomes a part of the dossier.

4 Conflict of Interest

While collaboration and cooperation are encouraged in AES, it is also important that all reviews avoid bias. Faculty members who have a professional or personal potential conflict of interest with a candidate should not serve on the candidate's PUEC (though they may be consulted by the PUEC), or in writing the Chair's, Director's, or Dean's report. Potential conflicts of interest include PhD or postdoctoral mentoring relationships, close collaborators (typically indicated by co-authorship on peer-reviewed publications in the past three years), co-PIs on current grants and personal relationships such as immediate family members. Questions on potential conflicts of interest should be directed by the Chair to the Dean or the Associate Vice Chancellor for Faculty Affairs.

5 Criteria

5.1 Evaluation of Scholarly/Creative Work

5.1.1 General Guidance

Faculty are expected to develop, lead, and maintain a vigorous and independent research program at CU.

A vigorous research program includes the following aspects:

- Repeatedly makes important contributions to the primary literature.
- Contributions appear in appropriate academic venues of high value to their research community.
- Builds and maintains a national and international scholarly reputation for the faculty member.

The department does not discourage productive collaborations with advisors and mentors, but such collaborations must be in addition to the faculty's own independent research program. An independent research program:

- advances the faculty member's own intellectual contributions,
- demonstrates their leadership in collaborative work, and
- demonstrates that they can conceive of and execute a vigorous research program, without their advisors and mentors.

Smead Aerospace Engineering Sciences Department CRPT

Appropriate venues for articles are leading academic journals and peer-reviewed conferences suitable for the candidate's field of research. Because standards vary across subfields, there is no minimum number of journal or conference papers. Rather, the PUEC letter should articulate the particular standard used to define "appropriate venues of high value to their research community," and should discuss any subfield-specific norms that contextualize the candidate's research program, e.g., in terms of venues, selectivity, or co-authorship norms (e.g., if there is special meaning assigned to author order, the meaning of 'joint first author' flags, how papers with many authors are evaluated, etc.).

The importance and impact of a candidate's research are evaluated holistically, focusing on their overall significance, influence, and depth, with guidance provided by:

- informed perspectives of our faculty,
- written assessments provided by appropriate external letter writers (when solicited) that situate the candidate's stature and work in their field and assess its overall impact and depth,
- the candidate's Scholarly/Creative Work Statement, and
- exemplary publications and artifacts provided by the candidate.

Research achievements and the candidate's stature within their field may be further contextualized using measures such as:

- scholarly awards,
- prestigious young investigator grants,
- citation counts,
- number or rate of journal publications,
- usage and impact information on computational artifacts,
- invited talks,
- altmetrics,¹
- patents,
- inclusion in textbooks or courses at other universities,
- adoption by industry, impact on the state of practice or policy at the national or international level, etc.
- record of attracting successful graduate students and directing their research work
- ability to obtain funding to support their research program.

The department expects faculty to obtain funding that is sufficient to support a vigorous research program and to fund the training of doctoral students at CU Boulder. The department has no specific minimum requirements for external funding, and it is to be expected that funding will vary based on the nature of the research program. The PUEC letter will provide context as to why the candidate's research funding level is appropriate.

¹ <https://en.wikipedia.org/wiki/Altmetrics>

Smead Aerospace Engineering Sciences Department CRPT

5.1.2 AES Review of Conference Papers

Traditionally, conference proceedings in the Aerospace field have served as a venue to disseminate preliminary findings with the expectation that a journal article containing a more complete treatment of the same material would be published later. However, Aerospace as a field has expanded to include disciplines such as computer science where this is not the case. Thus, in keeping with the practice of the rest of College of Engineering and Applied Science (CEAS) and other peer institutions, we consider some conference papers in some fields equivalent to journal publications. Such conference papers will be referred to as “journal-equivalent”.

Faculty should indicate which of their conference publications are journal-equivalent, and evaluators may verify these choices based on their judgment or the judgment of others in the field. Journal-equivalent conference proceedings are papers presented at conferences that should have the following attributes:

- Rigorous peer review of the entire article with an opportunity for author response before the decision
- Highly selective as measured by acceptance rate (less than about 30%)
- Recognition in the field that the conference proceedings are components of the academic record that are as important as journals.

5.1.3 Reappointment Guidance

A candidate’s research program is assessed based on whether it is on a compelling trajectory that is likely to meet the expectations for excellence in scholarly/creative work and/or teaching for Promotion to Associate Professor with tenure at the time of mandatory review. Candidates are expected to be actively building a research group at CU Boulder, leading research projects, writing and submitting scholarly papers, presenting works-in-progress, working on prototypes of computational artifacts if appropriate, applying for funding, and engaging with their research community. External letters are not solicited at this stage. Candidates are required to share three exemplary publications or artifacts from their time at CU Boulder as part of this review.

5.1.4 Promotion to Associate Professor with Tenure Guidance

To achieve a level of Meritorious in scholarly/creative work, a candidate will have established a vigorous and independent research program and will be actively engaged in training doctoral students to perform research at CU Boulder through that program.

To achieve a level of Excellent in scholarly/creative work, the candidate must be well established in their scholarly community as demonstrated by the measures above and be well positioned to maintain this success into the future as evident by in-progress funded research, having a pipeline of doctoral students, as well having pending journal submissions.

Smead Aerospace Engineering Sciences Department CRPT

Evidence for a successful research program at this stage includes the assessment by external letter writers and departmental peers. Candidates are required to share three exemplary publications as part of this review.

5.1.5 Promotion to Full Professor Guidance

To demonstrate that a candidate has met the standard of “overall excellence” required for promotion to Full Professor, they must have maintained a vigorous and independent research program. Their research achievements represent substantial, significant, and continued growth, development, and accomplishment and greater risk-taking, beyond their achievements up to their promotion to Associate Professor, and the external letter writers judge that the candidate’s research program has achieved the impact and depth appropriate for a Full Professor following department criteria for this position.

Candidates share three exemplary publications or artifacts that have appeared since Tenure as part of this review.

5.2 Evaluation of Teaching

5.2.1 General Guidance

Faculty are expected to:

- be an effective and inclusive teacher in the classroom,
- demonstrate mastery of the subject matters of their courses and foster high student achievement and participation,
- teach in and improve the department’s undergraduate and graduate curriculum,
- display the flexibility and cooperativeness required to carry a full share of the department’s teaching responsibilities over the long term, and
- train and be effective mentors of doctoral students at CU Boulder.

A candidate’s effectiveness as a teacher and educator is evaluated using multiple measures which include:

- the informed perspectives of our faculty,
- the candidate’s Teaching Statement,
- letters from current and former doctoral advisees and postdoctoral researchers,
- at least 3 peer observation reports by fellow faculty, carried out in different semesters to establish a pattern over time, with new reports provided for each promotion case,
- letters from students who took courses taught by the candidate,
- the department TQF teaching evaluation,
- syllabi of any new courses designed and taught, or of any courses substantially redesigned, by the candidate, and
- other measures, as deemed appropriate by the PUEC.

Faculty are expected to teach a mixture of regular undergraduate and graduate courses and are expected to demonstrate a willingness and ability to support the Department’s core teaching mission, broadly defined. Classes of any size and topic are valued. The

Smead Aerospace Engineering Sciences Department CRPT

department also recognizes that the characteristics of effective teaching vary as class sizes grow, and the PUEC should contextualize its assessment to account for such differences.

Faculty are expected to periodically update the courses they teach to cover relevant new advances or to improve engagement with an evolving student population. Faculty are not expected to propose new courses, but the department recognizes such efforts as particularly valuable contributions to its teaching mission.

Faculty are expected to advance the department's doctoral program teaching mission by:

- actively training CU Boulder doctoral students through their research program, and
- being an effective mentor in doing so.

Training doctoral students means serving as their primary or co-advisor and supervising their dissertation research. Being an effective mentor means providing rigorous training, supporting their professional development as a researcher, and facilitating their engagement with their scholarly community. Evidence of training can vary and depends on subfield-specific scholarship and collaboration norms, as explained by the candidate's PUEC, but typically involves co-authored publications, student presentations of research at professional meetings, and finally, graduation. Training Master of Science (MS) graduate students, undergraduate students, and postdoctoral fellows, or students at other universities in research all represent significant enhancements to one's mentorship but does not substitute for training doctoral students enrolled at CU Boulder.

5.2.2 Reappointment Guidance

A candidate's teaching is assessed based on whether it is on a compelling trajectory that is likely to meet the expectations for a Meritorious rating in teaching for promotion to Associate Professor with tenure at the time of mandatory review. Candidates are expected to be teaching regular courses in the department's curriculum, to be actively improving as a teacher and a mentor, and to be actively engaged in building a research group of doctoral students at CU Boulder. The department TQF classroom teaching and student mentoring sections are used for this evaluation. It is not expected that the faculty member has developed new courses at time of reappointment, and thus the new course development component of the department TQF form is not required.

5.2.3 Promotion to Associate Professor with Tenure Guidance

To achieve a level of Meritorious, the candidate must be judged as an effective teacher along multiple measures, contribute to both the department's undergraduate and graduate curricula, lead a research group of successful CU Boulder doctoral students (where success must be interpreted by subfield-specific scholarship and collaboration norms, see above), be considered an effective mentor, and demonstrate a commitment

Smead Aerospace Engineering Sciences Department CRPT

to carry a full share of teaching and mentoring responsibilities of a tenure-track professor over the long term. The candidate must achieve at least a level of Meritorious on the department's TQF teaching evaluation process.

To achieve a level of Excellent a candidate must achieve a level of Excellent in the department's TQF teaching evaluation and be engaged in publishing on pedagogical topics or involved in state or national education workshops on teaching, with a clear record of impact at these levels.

At this stage, particular emphasis is placed on letters from doctoral and postdoctoral advisees, and their timely professional advancement, such as graduation or making significant progress towards graduation for doctoral advisees and publications and job placement for postdoctoral advisees.

5.2.4 Promotion to Full Professor Guidance

A candidate continues to be, or has substantially grown, as an effective teacher along multiple measures, has a strong track record of leading and mentoring a research group of successful CU Boulder doctoral students, has actively supported the modernization of the department's undergraduate and/or graduate curricula, and has a track record of both carrying a full share of teaching and mentoring responsibilities over the long term and advancing the department's teaching mission, broadly defined.

5.3 Evaluation of Leadership and Service

5.3.1 General Guidance

Faculty are expected to:

- collaborate on, support, and lead efforts and programs that advance and improve the teaching and research missions of the department, college, and university (internal service),
- participate in department, program, college, and university activities intended to improve the quality of the University's program, and
- participate in professional activities and leadership intended to promote the development of their field.

The importance and impact of a candidate's leadership and service are evaluated holistically, with guidance provided by:

- informed perspectives of our faculty
- information from external reviewers commenting on significant external service
- the candidate's Leadership & Service Statement

Internal leadership and service typically takes the form of semester or year-long formal and informal activities that directly support the department's collective teaching and research missions, and the department values for a wide range of such activities.

Smead Aerospace Engineering Sciences Department CRPT

Internal service includes, but is not limited to, committee work (standing or *ad hoc* committees), faculty mentoring (formal or significant informal), significant administrative roles, significant public outreach on behalf of the university (local, state, national), and efforts to broaden student participation and retention. Unique and valuable internal service activities should be contextualized by the PUEC letter.

External leadership and service encompasses a wide range of formal and informal activities that directly support a candidate's scholarly community's activities outside of CU Boulder. External service includes, but is not limited to, formal peer review of scholarly contributions (as an *ad hoc* reviewer, member of a formal review committee, journal editor or senior member/chair of a formal review committee), organizing formal professional meetings, providing service to a professional society (via formal committees or in an elected or appointed position), formal evaluations of grant or fellowship proposals, and efforts that directly support broadening participation in a scholarly community (including formal external mentoring).

5.3.2 Reappointment Guidance

A candidate's leadership and service is assessed based on whether it is on a compelling trajectory that is likely to meet the expectations for Promotion to Associate Professor with tenure at the time of mandatory review.

Candidates are expected to be active members of departmental committees, and to be active contributors to the scholarly functioning of their scholarly community, including performing peer reviews for scholarly journals.

5.3.3 Promotion to Associate Professor with Tenure Guidance

To achieve a level of Meritorious, a candidate is an active and productive contributor along internal and external dimensions of service, demonstrates an initial track record of leadership both internally (department, college, or campus) and externally, and demonstrates a commitment to carry a full share of service responsibilities to CU Boulder over the long term.

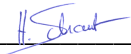
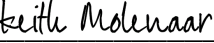

To achieve a level of Excellent, a candidate has shown exemplary performance in leadership and service. This can be demonstrated through several dimensions including assuming significant leadership roles in internal or external service engagements, achieving a large body of service and leadership accomplishments, performing particularly challenging service and leadership roles.

5.3.4 Promotion to Full Professor Guidance

For promotion to Professor, a candidate is expected to have an exemplary track record of important service contributions and service-oriented leadership, both internally (department, college, or campus) and externally, and a track record of carrying a full share of service responsibilities over the long term.

Smead Aerospace Engineering Sciences Department CRPT

Approvals

<p>DocuSigned by:  5F5D65D0D2F640D...</p> <hr/> <p>Hanspeter Schaub, Chair, Ann and HJ Smead Department of Aerospace Engineering Sciences</p>	<p>8/31/2023</p> <hr/> <p>Date</p>
<p>DocuSigned by:  84E9CCE726C24E6...</p> <hr/> <p>Keith R. Molenaar, Dean, College of Engineering and Applied Science</p>	<p>8/31/2023</p> <hr/> <p>Date</p>
<p>DocuSigned by:  B191482205CC431...</p> <hr/> <p>Russell L. Moore, Provost</p>	<p>8/31/2023</p> <hr/> <p>Date</p>