

## **Rationale for Inclusion of Innovation and Entrepreneurship in Faculty Review Sections of the *Faculty Handbook***

Iowa State University has been placing greater emphasis on innovation and entrepreneurship (I&E) as strategic institutional values and priorities. To support this engagement, the university has created a vibrant ecosystem where I&E are built into our teaching, research, and outreach activities across the university. The impact of these activities demonstrates the relevance of our work to the twenty-first century by providing tangible benefits to address societal challenges to improve the lives of all people; and supporting the innovation economy to strengthen our state and nation. However, our reward structures have not traditionally acknowledged and recognized accomplishments in these areas. This is borne out in the promotion and tenure process where the accomplishments and products of I&E scholarship can be set aside and/or devalued. For a growing cohort of faculty, a misalignment currently exists between our reward structure and the university-level values and priorities these faculty are asked to support.

Currently, the *Faculty Handbook* makes no mention or recognition of I&E in the realm of faculty responsibilities such as teaching, research, service, extension, or professional practice. Therefore, we propose recognition of I&E activities through specific inclusion in the *Faculty Handbook* in sections 5.1.1.2 Annual Reviews, and 5.2.2 Standards for Promotion and Tenure. These proposed edits are intended to facilitate a “broadening of the bar” to include faculty innovation and entrepreneurship impacts within faculty reviews and promotion and tenure evaluations. This proposal does not advocate for additional requirements that raise (or lower) faculty expectations. While faculty should not be required to engage in I&E endeavors as a criterion for promotion, accomplishments in I&E should not be discounted.

The I&E language proposed for inclusion in the *Faculty Handbook* as well as the additional guidance documents are in alignment with the recommendations of the national Promotion and Tenure Innovation and Entrepreneurship (PTIE) network (PTIE.org; 64 institutions) which, with funding from the NSF, is working across universities to develop a consensus framework on how to inclusively recognize I&E outputs within faculty reviews and for promotion/advancement.

A faculty I&E Working Group (Matt Darr, Lisa Schulte-Moore, Shelby Doyle, Carolyn Lawrence-Dill, Martin Thuo, and Jim Reecy) has worked closely with the Faculty Senate Research Policy and Programs Committee (RPPC), the Office of the Vice President for Research, and the Office of the Senior Vice President and Provost to develop the proposed language for inclusion in the Faculty Handbook. Two practical guidance documents (Document your Innovation and Entrepreneurship, and Innovation and/or Entrepreneurship Philosophy Statement) have been developed to assist faculty seeking to document their I&E accomplishments for their annual reviews and/or promotion/advancement reviews.

In response to feedback from the first reading, the words “or ways of doing things” were stricken from the definition of “innovation” (page 3, second last para.). Concern was raised that this part of the statement could not be quantified rigorously enough for promotion and tenure. In some respects, it was duplicative with “processes”, which is listed earlier in the definition. In addition, some concern was raised around innovation as applied to teaching and extension activities. As currently written under the Faculty Handbook section on scholarship (5.2.2.2.1) innovation and entrepreneurship like scholarship can be applied to research, teaching and extension activities, it is not solely applicable to research/creative activities as applied to promotion and tenure.

## **PROPOSED EDITS TO THE FACULTY HANDBOOK (Shown in Red)**

All proposed edits are additions to the current text.

### **5.1.1.2 Annual Reviews**

All faculty members (tenured, tenure-track, term, whether fulltime or part-time) will be evaluated annually (January 1 to December 31) for performance appraisal and development on the basis of their position responsibility statement ([FH section 3.4](#)). The evaluation is based on scholarship and contributions in teaching, research/creative/**innovation** activities, extension/**entrepreneurship**/professional practice, and institutional service as indicated in each individual's position responsibility statement. Each faculty member's overall performance shall be evaluated as either satisfactory or unsatisfactory ([FH section 4.1.1](#)). The annual evaluation will serve as a basis for determining merit salary increases.

The annual faculty evaluation process is the responsibility of the department chair. In some departments, the associate/assistant chair or a designated review committee has a role in the evaluation process. Department chairs will follow the annual evaluation process as outlined in their departmental governance document.

The departmental governance document shall specify the process by which the faculty member will provide evidence about their performance in the areas of their position responsibilities for the year under review. Failure by a faculty member to comply with that process will, except in extenuating circumstances, result in an unsatisfactory annual evaluation. For tenured faculty two consecutive unsatisfactory annual performance evaluations trigger a Post Tenure Review ([FH Section 5.3.4](#)), and for all faculty may also result in a charge of unacceptable performance as defined in the Faculty Conduct Policy ([FH Section 7.2.2.6.1](#)). Evaluation of faculty will be in accordance with their Position Responsibility Statement and their percentage of appointment.

The annual evaluation meeting between chair and faculty member provides an opportunity for an exchange of ideas of benefit to the individual and the department. The annual evaluation meeting includes a review of the faculty member's position responsibility statement and any action plans from the previous post-tenure review or annual performance evaluation.

The annual evaluation process is finalized in a written document that is prepared by the department chair and signed by both chair and faculty member. The report should include an evaluation of each area of the position responsibility statement as well as an overall summary assessment. It is the responsibility of the department chair to ensure that the evaluation is finalized in a timely manner and by the university deadline. The faculty member signs the evaluation as an acknowledgement of receipt, not as an endorsement of the evaluation.

A faculty member who disagrees with the evaluation may submit a written statement of concerns that will be appended to the evaluation. The faculty member may also appeal the evaluation through the established grievance procedures ([FH section 9.1](#)).

Amended and approved by the Faculty Senate on 2/12/13, by the Senior Vice President and Provost on 2/23/13 and the ISU President on 3/6/13.

### **5.2.2 Standards for Promotion and Tenure**

### 5.2.2.1 Introduction

Iowa State University is a public land-grant institution where liberal and professional education is merged with basic and applied research in pursuit of advancing society's potentials and assisting in solving its problems **and generating new knowledge**. The university serves the people of Iowa, the nation, and the world through its interrelated programs of teaching, research/creative activities, and extension/professional practice.

Evaluation of a faculty member for promotion and/or tenure is based primarily on evidence of scholarship in the faculty member's teaching, research/creative/**innovation** activities, and/or extension/**entrepreneurship**/professional practice. In all areas of professional activity, a faculty member is expected to follow the principles of faculty conduct as stated in [FH Section 7.1](#).

A key tool in the promotion and tenure review process is the position responsibility statement, which describes the individual's current position responsibilities and activities in the following areas: (1) teaching, (2) research/creative/**innovation activities**, (3) extension/**entrepreneurship**/professional practice, and (4) institutional service. This statement is used by all evaluators to interpret the extent, balance, and scope of the faculty member's scholarly achievements.

The following sections define and provide examples of scholarship and the four central areas of faculty responsibilities and activities.

### 5.2.2.2 Scholarship

#### 5.2.2.2.1 Meaning of Scholarship

All tenured and probationary faculty members are expected to engage in scholarship in their teaching, research/creative/**innovation** activities and extension/**entrepreneurship**/ professional practice. Scholarship is creative, systematic, rational inquiry into a topic and the honest, forthright application or exposition of conclusions drawn from that inquiry. It builds on existing knowledge and employs critical analysis and judgment to enhance understanding. Scholarship is the umbrella under which research falls, but research is just one form of scholarship. Scholarship also encompasses creative activities, **innovation, entrepreneurship**, teaching, and extension/professional practice. **Innovation generally refers to renewing, changing or creating more effective processes or products, while academic entrepreneurship refers to innovating ideas, products, businesses, and/or bringing about change that challenges the status quo of how people live on a daily basis.**

Scholarship results in a product that is shared with others and is subject to the criticism of individuals qualified to judge the product. This product may take the form of a book, journal article, critical review, annotated bibliography, lecture, review of existing research on a topic, or speech synthesizing the thinking on a topic. Also falling under the umbrella of scholarship are original materials designed for use with the computer; inventions on which patents are obtained; codes and standards; art exhibits by teacher-artists; musical concerts with original scores; novels, essays, short stories, poems; and scholarly articles published in non-research based periodicals, newspapers, and other publications; etc. In short, scholarship includes innovations and materials that are generally called "intellectual property" **and must be communicated in appropriate ways so as to demonstrate significant impact for the public and/or for the discipline itself (including future impact as appropriate).**

Scholarship generally implies that one has a solid foundation in the professional field addressed and is current with developments in that field. However, it must be noted that significant advances sometimes accrue when a scholar extends their scope of topics beyond those traditional to a particular discipline.

The following Table 1 describes the broad continuum of scholarship. It is adapted from Conrad J. Weiser, "The Value of a University - Rethinking Scholarship," draft version; and Ernest L. Boyer, *Scholarship Reconsidered - Priorities of the Professoriate* (Princeton, New York, The Carnegie Foundation for the Advancement of Teaching, 1990).

Table 1. The Nature of Scholarship

Character of scholarship	Audiences for scholarship	Means of communicating scholarship	Criteria for validating scholarship	Means of documenting scholarship
Develops and communicates new understanding and insights. Generates, synthesizes, interprets, critically analyzes, and communicates new knowledge, methods, understandings, technologies, materials, uses, insights, beauty and so forth.	Peers, undergraduate students, graduate students, post-doctoral associates, users, patrons, publics, <b>businesses, federal agencies, non-governmental organizations</b> etc.	Teaching materials and methods, classes, curricula; publications, presentations, exhibits, performances, patents, copyrights, distribution of materials or programs, <b>roles on advisory boards of businesses, governmental organization/non-governmental organizations</b> etc.	Originality, significance, accuracy, replicability, scope, applicability, breadth, depth and duration of influence, persistence of influence or use, adoption by peers, impact or public benefits, etc.	Present evidence that creative intellectual work was validated by peers; communicated to peers and broader audiences <b>in appropriate ways to demonstrate significant impact for the public and/or for the discipline itself (Including future impact as appropriate);</b> recognized, accepted, cited, adopted, or used by others. In other words, that it made a difference.

Table 1 describes the parameters to be used when judging the scholarly nature of a faculty member's achievements in all evaluation reviews.

The nature of scholarly work at a diverse university necessarily varies. In the promotion and tenure review process, however, evidence that a significant portion of a faculty member's scholarship has been documented (i.e., communicated to and validated by peers beyond the university) is required of all.

In some fields, refereed journals and monographs are the traditional media for documenting scholarship; in others, exhibitions and performances are the appropriate form. In still other fields,

emerging technologies are creating (and will continue to create) entirely new media. Finally, scholarship may be validated and communicated through conference presentations and invited lectures.

Faculty also may submit evidence of scholarship that has not been documented by peers in the discipline, even though this evidence alone would not be sufficient to justify promotion and tenure. Evidence regarding both documented and undocumented scholarship provides a holistic portrayal of the candidate's scholarly work. For example, course materials in and of themselves do not constitute scholarship. However, if an individual's course materials reveal that they "communicate new understandings and insights" (Table 1) effectively to students or "synthesizes, interprets, and communicates new knowledge" (Table 1) for students, this material may be submitted as supporting evidence of scholarship, even though it may not have been communicated to peers outside the university.

Scholarship often requires teamwork and other collaborative relationships, particularly because of the growth of interdisciplinary and collaborative programs. When work that is a result of joint effort is presented as evidence of scholarship, clarification of the candidate's role in the joint effort must be provided.

In the promotion and tenure review process, the emphasis is on the critical evaluation of the scholarly nature of the candidate's achievements by professional peers, including peers external to the university. Evidence should be presented as to the impact of the scholarship in terms of its depth, duration, and/or persistence of influence or use (e.g., citations, adaptations or use by others), as well as its public and critical appreciation. Table 1 provides the framework for the evaluation.

### **5.2.2.3 Teaching**

#### **5.2.2.3.1 Scholarly Teaching**

Most faculty have significant teaching responsibilities, and the quality of their teaching is a major factor in evaluating their accomplishments and performances. Teaching is a scholarly, **innovative** and dynamic endeavor and covers a broad range of activities. Some examples of teaching activities include the following:

- presenting resident credit courses, extension and international programs and courses, non-credit seminars and workshops, and continuing-education and distance-learning programs
- **development of new or improving the quality/impact of courses and/or internship programs**
- directing undergraduate and graduate projects, internships, theses, and dissertations
- serving on masters and doctoral committees
- advising and mentoring undergraduate students, graduate students, and post-doctoral associates

Particular expressions of effective teaching vary widely, and teachers may demonstrate their pedagogical skills in a variety of ways. Some may display their pedagogical abilities in organized lectures, others may promote collaborative learning or may improvise in the classroom in response to the dynamics of a specific group, while still others may be adept in facilitating group discussion.

When teaching is part of the faculty assignment, effectiveness is an essential criterion for advancement. Faculty must demonstrate command of their subject matter, continuous growth in the subject field, and an ability to create/**innovate** and maintain instructional environments to promote student learning.

Examples of activities that provide evidence of a faculty member's particular commitment to effective teaching include the following:

- contributions to curricular development, including collaborative courses and programs and service on curriculum committees
- pedagogical innovation, including the incorporation of new technologies and approaches to learning and assessment
- documented study of curricular and pedagogical issues, and incorporation of this information into the classrooms
- development of teaching materials
- pedagogically oriented research
- involvement in student research projects
- **involvement in student entrepreneurial activities**
- overseeing internships with companies
- contributions to professional societies and organizations that seek to improve teaching
- commitment to advising, which will include knowledge about curricular and extracurricular matters as well as an ability to aid students in using university resources
- **creation and /or incorporation of curricular content that connects the subject matter to societal impact through innovation**
- **support and instruct students in commercialization and I&E service activities - including developing collaborative approaches to solving complex world problems.**

A portfolio format is used to document faculty teaching activities beyond what is contained in the candidate's vita. The faculty portfolio includes materials such as teaching philosophy, student ratings of teaching, teaching materials and forms of assessment, peer evaluations based on both classroom observations and review of teaching materials, and evidence of student learning.

The effectiveness of the candidate's teaching activities is determined by evaluating the character of the scholarship of these activities using the criteria described in the scholarship section and in Table 1. The scholarship resulting from teaching is documented through such means as peer reviewed publications, textbooks, videos, software, workbooks, lab manuals, invited lectures and conference papers.

#### **5.2.2.5 Extension/Professional Practice**

Extension/professional practice distinguishes Iowa State as a land-grant university. Faculty members may engage in extension/**entrepreneurship**/professional practice activities by utilizing their professional expertise to disseminate information outside of the traditional classroom to help improve the knowledge and skills of their clientele (i.e., the publics they serve) or the environment in which they live and work. This work should be related to the faculty member's position responsibilities.



Examples of activities that fall within extension/professional practice include the following:

- organizing/leading workshops or training sessions
- engaging in clinical and diagnostic practice
- acquiring, organizing, and interpreting information resources
- engaging in transfer of technology/knowledge to society
- engaging in entrepreneurial activities
- consulting
- serving on agencies or boards because of individual expertise
- serving as a referee for journals, books, grants, exhibitions, etc.
- serving as an editor for a journal or serving on editorial boards
- leadership in professional societies or organizations

Since extension/professional practice activities vary greatly among departments, it is the responsibility of each department to identify faculty activities that fall under this category and the appropriate evaluation methods.

Faculty who engage in extension/professional practice are knowledgeable about current research and new developments in their discipline and demonstrate an ability to interpret and apply this knowledge to meet their clients' requirements. When appropriate, they develop and maintain professional relationships with their clientele in order to identify and serve their needs. They display leadership and initiative, are creative in the practical application of knowledge, and demonstrate a high level of disciplinary expertise as well as the ability to instruct, inform, and assist clients. In addition, a faculty member's professional practice reputation may be reflected by leadership in professional societies and organizations or by significant editorial-related activities.

A portfolio format is used to document faculty extension/professional practice activities beyond what is contained in the candidate's vita. The faculty portfolio includes materials such as descriptions of appointment responsibilities in extension/professional practice, representative workshop, seminar, and training materials; book reviews; unpublished reports, studies, etc.; newsletters and brochures; peer evaluations or ratings of extension/professional practice effectiveness; and client assessments.

The effectiveness of the candidate's extension/professional practice activities is determined by evaluating the character of the scholarship of these activities using the criteria described in the scholarship section and in Table 1. The scholarship resulting from extension/professional practice activities is documented through means appropriate to the professional specialty, such as peer-reviewed publications, lectures, videos, software, websites, hardware, workbooks, manuals, standards, bibliographies, book reviews, and casebooks. Evaluation of scholarship should consider breadth, depth, and duration of influence or use; public appreciation and benefit; and applicability or adoption by peers.

## **Guidance Documents (attachments)**

Document Your Innovation and Entrepreneurship

Innovation and/or Entrepreneurship Philosophy Statement

ISU PTIE Slide Deck

Carter RG, Mundorff K, Risien J, Bouwma-Gearhart J, Bratsch-Prince D, Brown SA, Campbell AL, Hartman JC, Hasemann CA, Hollenbeck PJ, Lupiani B, McCarty OJT, McClure ID, Mealey K, Mimura C, Romero AJ, Sztajn P, Van Egeren L. Innovation, entrepreneurship, promotion, and tenure. *Science*. 2021 Sep 17;373(6561):1312-1314. doi: 10.1126/science.abj2098. Epub 2021 Sep 16. PMID: 34529484