

# Augustana College Department of Physics, Engineering, and Astronomy Expectations for Tenure and Promotion<sup>1</sup>

## ***The Mission Statement of the college:***

Augustana College, deeply rooted in the liberal arts and sciences and an inclusive expression of Lutheran higher education, is committed to offering a challenging education that develops the qualities of mind, spirit, and body necessary for students to discern their life's calling of leadership and service in a diverse and changing world.

## ***The Mission statement of the department:***

The department seeks to prepare students for careers in scientific research, industry, engineering, and teaching. We train our students rigorously in their academic track of choice and prepare them for a career as citizen scientists and engineers. We seek to prepare students to understand the impact of what they research, teach, and design to help them appreciate the human impact of what they do.

Our program prepares students who have these goals, within the context of a liberal arts foundation. The members of the department teach courses for students who major in physics or engineering and then (a) attend graduate school in engineering, physics, astronomy, or related fields, (b) teach physics in high school, (c) work for a company or the government, (d) become a consultant, or (e) complete a degree in engineering. We also teach courses that are taken by many non-majors.

The department strives to accomplish its goals within the context of the institutional mission and the mission of the STEM Division. Institutionally, Augustana seeks to develop in persons those qualities of mind and spirit necessary for full participation in our diverse and changing world. As a part of the Division of Natural Science, the department endorses the premise that it is essential for citizens to possess an appreciative awareness of science and technology and to understand the role of science and technology in defining the present and shaping the future.

## ***Introduction:***

The purpose of this document is to clarify the Department of Physics, Engineering, and Astronomy's interpretation of the college's mission in terms of expectations and standards for tenure and promotion of faculty. Candidates should be aware that these expectations are necessary for a recommendation from the department for tenure or promotion, but not sufficient for the granting of tenure or promotion. Candidates for tenure and promotion should recognize the role and expectations of other key constituencies involved, namely: the Faculty Review Committee that makes recommendations for tenure or promotion to the office of Academic Affairs, the Dean of Academic Affairs who brings these recommendations to the President's Office, and the President who makes such recommendations to the Board of Trustees. These constituencies may have additional requirements for tenure and promotion consistent with the

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mission of the school, the Faculty Handbook, and guidelines recommended by the American Association of University Professors.

It is understood that, while not expressly required by the department, such additional expectations are not inconsistent with the department's mission and may be important to the college's broader mission or strategic position as an institution of higher learning. To that end, one of the important roles of the Department Chair is to advise and mentor candidates as to the expectations for promotion and tenure beyond those expressed in this document. Please note that in all cases, the Faculty Handbook is the college's official policy. Faculty are strongly encouraged to use the Faculty Review Committee's preparation documents and [website](#).

### ***Expectations for tenure-track faculty and promotion to full professor of tenured faculty***

The following is a description of the tenure track and promotion to full professor expectations. It is strongly advised that candidates read the relevant section of the Faculty Handbook (chapters 3 and 4 for tenure-track and tenured faculty) since this is the official college policy.

It should be noted that promotion to full professor is stated in the Faculty Handbook 4.2.3.1 as follows: "At this highest level, promotion, like tenure, must be earned. It is expected that as careers develop, faculty should assume leadership roles within the College while continuing to show evidence of significant growth in all areas of faculty evaluation (teaching and advising, professional expression and development, campus service, community service), with meritorious achievement apparent in some portion of the record." Within the following sections, promotion to full professor expectations will be described if they are different than those of tenure. In addition, promotion to full professor entails taking on leadership roles in any of the categories that follow.

1. **Teaching:** The Department of Physics and Astronomy views teaching to be the primary responsibility of the faculty and will place the greatest emphasis on teaching when tenure decisions are made. The goal of the department is to provide students with an understanding of scientific concepts and to further the development of analytical, empirical, and quantitative skills. Faculty members are expected to develop and implement dynamic teaching methods that emphasize current best practices and student engagement. The department believes that there is a range of best practices and teaching styles that fulfill this end and therefore no one member of the department will necessarily be using identical teaching methods. However, it is assumed that all faculty must continuously work to refine and improve their set of individual teaching strategies consistent with best practices in the field of physics teaching, rooted in data and empirical evidence.

Evaluation of teaching ability will be based on the following items:

- Development of Instructional Methods: Faculty are expected to aggressively develop instructional methods to encourage student engagement with the material. These new methods should be based on current work in physics instruction at Augustana or the greater

physics teaching community. Faculty are encouraged to pioneer entirely new methods, so long as these new experimental methods are accompanied by learning assessment.

- **Development of Laboratory Activities:** Laboratory work is an important part of the curriculum. Faculty with laboratories attached to their courses must be in close communication with the department lab manager to help develop new laboratories and improve existing laboratory exercises. All department members are expected to contribute to any major curricular decisions concerning introductory laboratories and related assessments.
- **Familiarity with Current Best Teaching Practices:** Faculty are expected to keep current with teaching pedagogy in the field via reading journals, and attending conferences and discussions with fellow faculty.
- **Publication or Presentation of Teaching Scholarship:** Faculty are encouraged to present their ideas and results on the scholarship of teaching and learning in journals and at professional meetings.
- **Student Assessment:** Faculty are expected to collect IDEA form data from all classes taught (three credit hours or greater) as well as develop other feedback or assessment mechanisms for evaluating student learning (for example, but not limited to, pre-/post-test concept inventories, learning attitude assessment, or writing assessment).
- **Advising:** The department interprets advising majors and minors to be any out-of-the-classroom interaction with students that leads to their growth as liberally educated scientists and engineers, not restricted to course registration or career advising. In this understanding, all faculty in the department are required to share in the advising of our physics and engineering students in any of the following forms:
  - research advisors
  - leading or participating in student activities associated with the Augustana Physics and Engineering Society (APES), American Physical Society - Inclusion Diversity Equity Alliance (APS-IDEA) group, or other student group activities and outreach events
  - leading Symposium Day lectures or events
  - advising students in course registration and career advising/mentoring - official advisors are assigned by the Department Chair and are based on a departmental advising model.

2. **Scholarship:** The department expects faculty to be engaged in professional research related to their subfields or the scholarship of teaching and learning in order to keep current with developments in their craft as well as for professional growth. Furthermore, the PEA Department believes the primary role of research in the department is to train undergraduates in the tools and expertise of scientific investigation. Therefore, faculty are encouraged to include undergraduate research assistants in their own professional work. The department also understands that the nature of physics and engineering is often beyond the capabilities of typical physics and engineering undergraduates. In these cases, faculty are expected to carry out their professional research separately, but in addition to advising undergraduate research.

Evaluation of excellence in scholarship will be based on the following:

- Research: Faculty are expected to advise undergraduates in undergraduate research. If separate from the faculty's professional research, faculty are expected to participate in professional scholarship in their field in addition to advising undergraduate research.
- Publication: Pre-tenure faculty are expected to publish at least **one peer-reviewed journal article** in their subfield or the scholarship of teaching and learning before their tenure review. Candidates can still be recommended for tenure without the publication of a peer-reviewed article, so long as they show compelling evidence that their research is leading to peer-review publication such as submission or review of a grant, preliminary results or completed manuscripts, papers currently submitted for review, etc. The department notes that **a single peer-reviewed publication without evidence of a long-term research program involving undergraduates** is not sufficient for tenure recommendation. The publication is meant to be a measure of an active research program, not an isolated item to check off a list. Similarly, faculty seeking promotion from associate to a full professor who emphasizes "professional activity" as an area of exceptional achievement is expected to show evidence of an active research program, including publication or evidence that their continued research is leading to publication. Tenured faculty seeking promotion at the least must show active participation in professional and undergraduate research but are not required to publish or show evidence leading to publication.
- Presentations: Faculty are encouraged to present their work at conferences. Preference is given to invited talks over non-invited, work presented at major, national, or international conferences over minor or regional conferences, and peer-reviewed conferences over non-peer-reviewed. Invited talks or presentations at peer-reviewed conferences can count as evidence of active research leading to peer-reviewed publication.
- Consulting: The department has an engineering program with growing ties and engagement with local and national industries. Consulting, either for private or public organizations or corporations is an important type of professional engagement in physics and engineering. Consulting work is encouraged for faculty for whom it is applicable and will be considered evidence of professional engagement. Candidates that have done consulting work should provide documents describing the work and its quality, such as white papers, patents, and letters from key personnel involved with the work. White papers or patents, accompanied by a support letter from the particular corporation, can serve as a replacement for the publication requirement (or evidence toward publication) for pre-tenure candidates and faculty seeking promotion from associate to full professor.
- External Funding: In those cases where it is appropriate, faculty are also encouraged to seek external funding to support their research. Grants can be from regional, state or federal, public or private funding sources and can support research or other departmental activities. Preference is given to successful grants, but unsuccessful grant applications can be considered evidence for scholarly activity. Grants that are submitted to competitive private and public agencies such as the National Science Foundation, the Department of Defense, the Department of Energy, Research Corporation, and the National Institute of Health with high scores, though not necessarily funded, are looked upon in the field of physics and engineering as much more difficult to achieve than peer-reviewed publication and should be treated as exceptional scholarly work. Candidates should include grant

documents and feedback received from the grant committees in their tenure supporting documents.

3. **Service:** All tenure-track and tenured faculty members in the department are expected to be active participants in the life of the college and department. We also expect faculty to be committed to bringing science to the general public. Faculty are also encouraged to be involved with professional organizations in their field of study. Given other demands on the candidate, it is not expected that pre-tenure faculty will be able to be as involved with service as tenured faculty, but it is expected to see some engagement with campus and departmental activities and outreach efforts.

Evaluation of the candidate's commitment to service will be based on the following items:

- Departmental: There are many areas of faculty service to the department, including advising majors and minors, developing broader departmental and lab curricula, participating in department assessment, teaching observation, involvement with faculty search efforts, hosting prospective students, and participating in department-related admissions events. Pre-tenure faculty are not expected to do all these things, but a demonstration of a commitment to the activities and mission of the department is expected.
- Campus: There are also many areas of faculty service to the college as a whole. These include attendance at faculty meetings and events, service on faculty committees, advising campus organizations, and many others. Through these activities, the faculty member should show a commitment to the campus and its mission.
- Outreach: Bringing science to the general public is an important part of the mission of the department as evidenced by our two major outreach endeavors. APES and/or the department hold open houses on campus and also take demonstrations out to local schools and community organizations. The John Deere Planetarium hosts field trips for school students and also holds open houses for the general community. Other outreach activities may also be developed outside of these programs, such as summer camps for young students, K- 12 teacher education, science competitions, etc. Faculty involvement can include planning and organizing outreach events, designing demonstrations, operating demonstrations or telescopes, answering visitor questions, and helping to write grants to fund outreach activities. Pre-tenure faculty are not expected to assume primary responsibility for outreach but are encouraged to participate.
- Professional: Organizations including the American Physical Society, the American Association of Physics Teachers, Sigma Xi, and many others are important for promoting physics and engineering, and facilitating professional interaction. Participation in these societies can involve a wide range of activities, including membership, meeting planning, service on committees, and service as an officer.
- Program Development: Additions of new programs and changes to existing curricula extending beyond standard course development. Examples of this work include new programs such as the Bachelor of Science in Engineering (BSE), major changes to existing majors, seeking and successfully Accrediting a program, and changing major requirements. Clearly, there are different levels of this work but it is distinct from Teaching since these are programmatic changes rather than work tied to specific courses.

4. **Diversity, Equity, and Inclusion:** As passed by faculty, all faculty are required to participate in diversity, equity, and inclusion activities. Since this is new to faculty reviews in fall 2022 faculty development may be needed, therefore showing growth in this area will be sufficient for the promotion of tenure-track faculty. Promotion to a full professor should show the development of active contributions to either of the areas of Teaching, Scholarship, and/or Service. What follows are examples from the department in this area, but please consult this [guide](#) for ideas not represented below.
  - Teaching: Promoting or developing teaching techniques to highlight contributions in the field from diverse perspectives such as Studio Style teaching environments.
  - Scholarship: Consulting research on ways to engage or develop DEI initiatives, publications, or contributed talks on DEI
  - Service: Promoting or developing activities that support students outside of the classroom, bringing in speakers from diverse perspectives, and providing additional support for students

### ***Expectations for the Promotion of Professional Faculty***

The faculty handbook states that: Criteria for the promotion of APT and Professional faculty are different than expectations for tenured and tenure-track faculty. APT and Professional faculty will be evaluated for promotion based on their teaching effectiveness and effectiveness in discharging responsibilities other than classroom teaching that are in accordance with the candidate's position. As stated in the introduction of the document it is strongly advised that all candidates for promotion read the relevant sections of the Faculty Handbook (chapters 4 and 5 for Professional Faculty). In all cases, the Faculty Handbook is the college's official policy. Faculty are strongly encouraged to use the Faculty Welfare Committee's preparation documents and website.

1. **Teaching:** Departmental expectations of Professional Faculty seeking promotion are the same as those for tenure-track faculty spelled out in this document. Professional Faculty whose teaching duties comprise more than half of laboratory instruction are strongly encouraged to request IDEA forms for their laboratory sections each term or find another kind of metric for student evaluation of laboratory and laboratory instruction. Because introductory physics laboratories carry no credits for students and are seen as a portion of the parent course of which they are a part, there is no history in the department of administering or requiring official student evaluation of introductory labs. This poses potential limitations on evidence that professional faculty in the physics department can show to support their case for promotion.
2. **Administration:** Professional faculty have a component of their load assigned to administrative duties in service to the department and the college. The administrative job of the Lab Manager, as shown below, is our department's example.

3. **Lab Management:** The department lab manager is expected to use the portion of their non-teaching load for maintaining and repairing laboratory equipment in the introductory physics labs, organizing the laboratory schedule, purchasing necessary equipment, managing student teaching assistant support to laboratories, and developing new lab curriculum in coordination with course instructors. When developing labs for courses taught by other professors, the lab manager must defer to the expertise and opinions of the course instructor as to what particular lab content is required as well as the particular kind of lab administration desired. For example, it could be that the instructor wants to keep all of the lab exercises from the previous year or that the instructor wants to overhaul all labs. However, it is understood in general that curricular lab decisions will be a cooperative effort between the instructor and lab manager. The lab manager is strongly encouraged to develop new lab exercises based on best practices, more current equipment, and pioneer new practices so long as they are approved by the instructor prior to lab administration. In this cooperative manner, course instructors cannot expect unreasonable lab redesign and redevelopment (such as an overhaul) without giving proper lead-time to the lab manager, and unless such a task is within the lab manager's assigned load given other lab management and teaching duties. Course instructors and the lab manager are also expected to consult with the entire department before any significant redesign of introductory laboratories for which all members of the department must be invested.
4. **Scholarship:** Professional faculty do not have expectations for scholarship as described above for pre-tenure and associate to full professor promotion. Any scholarship activity should be looked at in an extremely favorable light since this is really above and beyond what is expected of professional faculty.
5. **Service:** Professional faculty are expected to serve the department in a similar capacity as tenure track candidates as spelled out in this document. Service to the college is encouraged and looked upon favorably for promotion, but not required.
6. **Diversity, Equity, and Inclusion:** As described above in tenure-track and promotion to full professor, DEI activities are expected of all faculty regardless of rank. The examples shown above along with examples from this [guide](#) would be sufficient.