

PTR Research Criteria: Department of Mathematics
December 19, 2024

Tenured faculty in mathematics generally teach four courses per year and are often involved in graduate education. They are also engaged in service to the department and profession and conduct research with a typical faculty assignment of 50 percent teaching, 10-15 percent service, and 35-40 percent research.

In the rating categories below, faculty are not required to achieve all outcomes described for each category, nor is any single outcome definitive in achieving that rating, unless otherwise noted. Any documented efforts of activities in publishing in high quality outlets and participation in or organization of national and international research will be taken into account; that is, qualitative factors will be considered in the recommendation of a performance rating.

Research Criteria

A faculty member who exceeds expectations is generally expected to have produced evidence of the following over the prior 5 years:

- Thirteen or more peer reviewed research articles or research output of similar breadth and impact.
- Grant awards or external financial support of \$232K or more.
- Evidence of a high level of professional impact. Examples of such evidence include:
 - Regular participation in invited presentations at professional meetings, conferences, workshops and other venues.
 - Seminar presentations at research universities.
 - Citations and reviews of scholarly works.
 - Professional recognition and awards.
 - Involvement in national or international advisory committees for research foundations or federal agencies; e.g., serving on National Science Foundation panels.
 - Involvement in national or international research prize committees.
 - Development of, or substantial contributions to, mathematical software.

A faculty member who meets expectations is generally expected to have produced evidence of the following over the prior 5 years:

- Between four and 12 peer reviewed research articles or research output of similar breadth and impact.
- Evidence of professional impact and engagement with the discipline. Examples of such evidence include:
 - Regular participation in invited presentations at professional meetings, conferences, workshops and other venues.
 - Seminar presentations at research universities.
 - Citations and reviews of scholarly works.
 - Active participation in department seminars.
 - Development of advanced graduate curriculum.

- Development of, or substantial contributions to, mathematical software.

A faculty member who does not meet expectations is generally expected to have produced evidence of the following over the prior 5 years:

- Between two and three peer reviewed research articles or research output of similar breadth and impact.
- Inconsistent evidence of professional impact and engagement with the discipline.

Examples of such evidence include:

- Participation in invited presentations at professional meetings, conferences, work- shops and other venues.
- Seminar presentations at research universities.
- Citations and reviews of scholarly works.
- Active participation in department seminars.
- Development of advanced graduate curriculum.
- Development of, or substantial contributions to, mathematical software.

A faculty member who is unsatisfactory exhibits the following performance characteristics over the prior five years.

- Substantial and chronic deficiencies or failure to meet expectations in research, scholarship, or creative works as expected in the faculty member's discipline, with minimal to no efforts to follow previous advice or other efforts to make corrections.
- One or fewer peer reviewed research articles or equivalent.
- An absence of professional impact and engagement with the discipline. Examples of such evidence include:
 - Participation in invited presentations at professional meetings, conferences, workshops and other venues.
 - Seminar presentations at research universities.
 - Citations and reviews of scholarly works.
 - Active participation in department seminars.
 - Development of advanced graduate curriculum.
 - Development of, or substantial contributions to, mathematical software.