

Criteria for Professional Science Master's Programs

The Professional Science Master's (PSM) degree is a unique professional degree grounded in natural sciences, technology, engineering, and/or mathematical sciences and designed to prepare students for a variety of careers in industry, business, government, or non-profit organizations. The degree combines advanced coursework in natural sciences and/or mathematics with an appropriate array of professional skills-development activities to produce graduates highly valued by employers.

The following criteria must be met in order for a master's program to qualify for PSM status.

- 1) The higher education institution must be accredited by a regional accrediting agency.
- 2) A program must have a stated mission, goals, and outcomes appropriate to the particular degree.
- 3) The total number of credits must be at least equivalent to the minimal number required for a master's degree at the institution.
- 4) Programs must include the following three components:
 - a) a majority of the course content in the natural sciences, technology, engineering, and/or mathematical/computational sciences in which knowledge is commonly advanced by an active research community engaged in peer-reviewed quantitative research. This coursework may be interdisciplinary or multidisciplinary.
 - b) a professional skills component must be developed in consultation with employers. Examples of professional skills components include business basics, policy, legal and regulatory issues, finance and marketing, organizational behavior, ethics, communication, and teamwork. These courses and/or activities are often developed in collaboration with appropriate academic units outside the sciences. Adjunct faculty members from targeted employment sectors further enhance students' learning experiences.
 - c) an experiential component that must include at least one capstone project, supervised and evaluated by faculty and typically developed with an employer(s), which integrates the practical application of scientific and professional knowledge, behavior, and skills. The experiential component typically includes a structured internship. The product must consist of a written proposal, a report, and an oral presentation.
- 5) Program quality assurance must be provided using the faculty-based mechanisms normally used by the institution for graduate programs in order to ensure institutional integration and sustainability.

- 6) An active and engaged employer advisory board is required. Examples of collective and individual board-member functions include providing advice on the program curriculum, assisting with projects and placement, and interacting individually with students.
- 7) The program must report annual data relative to enrollment, degrees, completion, and demographics, and attempt to track the employment history of every graduate to help assess program outcomes.
- 8) Programs agree to use the name “Professional Science Master’s” and the PSM logo on websites and other promotional materials.