IN PRACTICE ARTICLE

A Streamlined Process for Program Affiliation
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N 2019, THE NPSMA RESTRUCTURED THE AFFILIATION PROCESS WITH SEVERAL GOALS, INCLUDING:

- decreasing the cost of affiliation to NPSMA members
- Elucidating the role of the NPSMA in the affiliation process
- Proving streamlined guidelines for affiliation / reaffiliation

The NPSMA created a streamlined, online format to facilitate submission of information needed to grant PSM affiliation. This new format creates an efficient means for reviewers to access the material. Since launching the new initiative, the NPSMA has evaluated 15 programs. It has realized its goals of decreasing the cost for individual programs while significantly improving the process of affiliation / reaffiliation.

Introduction
The new NPSMA affiliation process requires that applicants specify the STEM content, the professional competencies, foundational and transferable skills, research/work-based learning component, composition of the external advisory board, and program's contact information. We have found that when universities are required to provide these details on their website, their professional science master's program is more robust. It shows that it is well thought out and, in all likelihood, will meet the required criteria. On the application form, directors also mark their engagement with the PSM community and provide a letter of support from senior administration.

The New Affiliation Process
The new streamlined affiliation process aligns PSM programs with the National Academies of Sciences, Engineering, and Medicine (NASEM) consensus study report: *Graduate STEM Education for the 21st Century* (2018). Specifically, the NPSMA seeks

greater than 50% STEM content, a clear transferable skills component, evidence of an active External Advisory Board, and opportunities for real-world training (Figure 1).
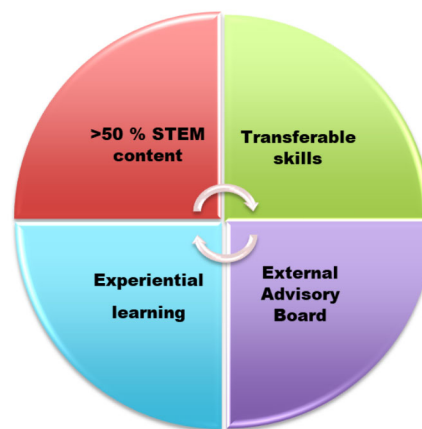

Figure 1: What Makes a Master's Program a Professional Science Master's?

The new application process relies on the program's website for general information and, in many cases, the university's catalog for detailed course descriptions. Information regarding the program of study, breakdown of required and elective courses, and an explanation of the experiential learning component should be easily accessible on the program's website. At some universities, the program director has control of their website and is able to update information quite easily. However, there are many schools where the requests to update information go through the marketing and communication office, so changes may take longer to implement. In either case, it is the program director's responsibility to make sure the information is accurate and comprehensive.

The affiliation committee relies heavily on the institution's completed application for accurate information. The committee strives for a quick turnaround time and is readily available to provide guidance and answer questions regarding the process.

Although the reaffiliation process requires an individual application for each program, it is easy to store the redundant information in text form for subsequent copying and pasting. Additionally, the new process significantly reduces the quantity of demographic data requested.

Program Review Process

After the affiliation committee receives an application, three members of the NPSMA Affiliation Committee are selected to review the request. The turnaround time is generally two weeks. If all three committee members agree that the program meets the affiliation guidelines, the committee chair will notify the program director of the decision within a week's time (Figure 2). If the committee has questions, the affiliation committee chair contacts the program director for additional information or clarification. If the program does not meet the guidelines, the committee chair will extend advice on how best to go forward and resubmit. We have found that this is also an opportunity to advocate for our well-established best practices. For example, a proposed advisory board may be primarily composed of internal administrators and faculty. In this case, we would recommend that the program direc-

tor reach beyond their university to form an external advisory board that includes representatives from the workforce: business, industry, and government, as these are essential for building a sustainable PSM program.

Program applications may not be approved due to lack of clarity about STEM content, or how the foundational and transferable skills are incorporated, or what the work-based project looks like, or even the distribution of credit hours. In this case, the affiliation committee chair will send notification to the program director detailing the information that is missing or not clearly visible on the website.

If there are remaining questions after the second submission, the entire committee will review the application to determine whether the program, as represented by the application materials, meets the NPSMA guidelines and standards. It is a very straightforward and transparent process. The NPSMA is committed to its member institutions and strives to make affiliation a painless and transparent process. Let's get started!

PSM Program Director
• Submits online application

NPSMA Affiliation Committee Chair
• 3 members of committee assigned to review - outcome approved or resubmission requested
• After resubmission, full committee review - outcome approved or denied

PSM Program Director
• Notified of Decision

Figure 2: Affiliation / Reaffliation Workflow

The NPSMA invited University of Utah and Temple University, whose PSM programs underwent recent affiliation/ reaffiliation, to share their experience.

University of Utah

The University of Utah's Professional Science Master's programs completed their reaffiliation applications in the spring of 2020. The five programs include Biotechnology, Computational and Data Science, Earth Resource Management, Environmental Science, and Science Instrumentation. The University of Utah manages these five programs as "tracks" within a single department in the Graduate School—the Professional Master of Science and Technology. Four of these tracks were PSM affiliated programs while the fifth track, Earth Resource Management, was established in 2019.

The University of Utah website clearly displays much of the information requested for affiliation. However, the NPSMA asks for additional information that is not readily available on the program web pages, such as the list of advisory board members and letter of support. Program director Dr. Ray Hoobler of the University of Utah did not see the request for this information as an onerous task. He found it quite easy to upload the document describing his external advisory board and the letter of support from the dean of the graduate school. For the University of Utah's five programs, Dr. Hoobler estimates the entire affiliation process took less than a day —not counting the time needed to secure the "sign-off" letter from the dean.

Temple University

Temple University's College of Science and Technology expanded its PSM programs from five to seven. The University added two new programs, High Performance Computing for Scientific Applications and Cyber Defense and Information Assurance, to the existing programs: Biotechnology, Bioinnovation, Bioinformatics, Forensic Chemistry, and Scientific Writing.

Dr. Seema Freer, the managing director of PSM programs in the College of Science and Technology at Temple University, stated that the affiliation of these programs was significantly simpler than the previous process. In one case, a detailed website and completed list of external advisors were not submitted at the time of application. In the review, the NPSMA affiliation committee reached out to Dr. Freer to ask for the missing details before they approved affiliation. Dr. Freer added that the NPSMA Affiliation Committee chair, Dr. Avril Robertson, was readily available and provided helpful guidance throughout the process. Overall, the affiliation application process was fundamentally streamlined and less arduous than the original process. The turnaround time for affiliation, including the request to provide additional information, was less than two months.

References

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