

The ETS® Major Field Tests

Evaluating knowledge.
Creating a pathway to better learning.



Vera Dragisich
Director of Academic Programs
and Graduate Studies,
The University of Chicago,
Department of Chemistry

As Director of Academic Programs and Graduate Studies for the Department of Chemistry at the University of Chicago, I am responsible for advising students on their program requirements, developing and teaching a training course, and supporting students throughout their tenure with us and beyond.

First-year graduate students in our Ph.D. Chemistry program are required to successfully achieve four milestones before they proceed to candidacy — one of which is demonstrating acceptable basic knowledge levels in the areas of physical, organic and inorganic chemistry.

Seeking solutions in a COVID-19 world

The American Chemical Society (ACS) standardized exams satisfied the knowledge area competency in the foundational subareas of chemistry for decades. However, because the exams were administered in person, over two

days, during an intensive, two-week Teaching Assistant (TA) training program we needed to find a testing alternative when COVID-19 forced our campus to close. We reached out to ETS to see if they had a remote solution, as it was critical we were able to maintain our basic knowledge assessment requirement.

The assessment team at ETS suggested using the ETS® Major Field Test (MFT) in Chemistry diagnostically, post admission. The MFT is a validated, research-based assessment designed to measure the effectiveness of undergraduate curriculum within major fields of study. A review of the assessment showed that it measured exactly what we were looking to evaluate — using a remote-proctored, online test — and we were able to quickly pivot to this solution and keep our program requirements on track.

Identify and remedy knowledge gaps early

While our immediate need was a remote alternative to the ACS exams, additional benefits from using the MFT for Chemistry quickly became apparent. Remote proctoring with ProctorU® meant my staff, TAs and I were no longer encumbered with proctoring and grading the exams. The time commitment for administering the ACS exams became burdensome as our program grew and the MFT gives us the insights we need, in a streamlined, efficient and effective manner. And because students take the test when it is convenient for them — before they even arrive

on campus to begin their first year — they know right from the get-go where to focus their attention if they did not perform well in any of the key subject areas. This head start on remediating weaknesses and filling in knowledge gaps early is invaluable for both students, program staff and faculty, and helps ensure that nobody is left struggling later in the program.

The insights we get from the MFT are worth their weight in gold. As an aside, our students organically developed tutoring bootcamps for peer-to-peer support to bolster successful completion of the knowledge assessment milestone, and MFT results help students understand the areas where they most need this kind of support.

Efficient, effective and insightful

The MFT also provides data that offers additional insights into what students know in other areas that our program hadn't traditionally been able to measure early on (e.g., biochemistry, critical thinking, reasoning and more). We are also able to add subgroup questions to get background information on what courses students may or may not have taken in their undergraduate programs (e.g., Did you take inorganic chemistry in your undergraduate program?

"The insights we get from the MFT are worth their weight in gold."

Did you take linear algebra in your undergraduate program?), which gives us a better understanding of what we should expect our incoming cohorts to know or be able to do. Additionally, switching to the ETS Major Field Test for Chemistry meant students no longer lose out on two full days from their TA training and orientation program now that we don't have to use that time for test administration.

While we were looking for a streamlined way to more effectively and efficiently administer a basic knowledge assessment to meet our first-year milestone requirement, the MFT for Chemistry gave us so much more. I would be remiss not to mention how wonderful it is to work with the folks at ETS. They are so knowledgeable and eager to support my program's success in any way that they can — in addition to alleviating a huge pain point, having a trusted partner in ETS is one of the best parts of our experience with the ETS Major Field Test.

Review [ETS Major Field Test discipline coverage](#) and contact us at 1-800-745-0269 to discuss how this approach may help you and your graduate students.