NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS (NCTM) 2020 STANDARDS FOR SECONDARY LEVEL

*Instructions on Completing SPA Program Review Template/Form: **Option 1***

For use with: Program-level plans to meet Specialized Professional Associations (SPAs) **NCTM** standards
For use by: Program Report Compilers and SPA Program Reviewers

Educator preparation providers have widely used outcome assessments aligned to standards developed by SPAs to monitor progress of candidates and evaluate programs. The purpose is to ensure that candidates are capable of applying content and pedagogical knowledge and provide evidence for CAEP Component 1.3 (Initial Level Programs) or CAEP Component A.1.2 (Advanced Level Programs). Programs selecting the SPA Program Review with National Recognition **Option 1** use six to eight key assessments to provide evidence that SPA standards/components are met. In their entirety, the assessments and data required for submission should demonstrate the candidates have mastered the SPA standards.

Which Programs Should Submit NCTM SPA Reports?

Programs that are designed to prepare and recommend initial licensure in secondary mathematics education and are pursuing SPA National Recognition as part of CAEP accreditation will respond to these guidelines.

How to Complete the Program Report Template/Form

SPA Program Review is conducted through CAEP's Accreditation Information Management System (AIMS). A program would request a template ("shell") through AIMS using institutional login information. Instructions on how to request shells are provided on the CAEP website.

COVER SHEET

(Must be completed for initial, revised, and response-to-conditions reports)
Complete the entire section: Numbers 1-16.

Question 16. State Licensure requirement for national recognition:
NCTM, in alignment with CAEP policy, does not require an 80% pass rate for the program completer cohorts reported taking the state licensure examination(s) in the content field. However, the last three years of candidate performance data on the licensure examination(s) must be reported in Section IV of the SPA report template as evidence for Assessment 1 in initial review reports. Identify whether your state requires such a test.
- Yes
- No

SECTION I. CONTEXT

This section provides context for your institution. Information from this section is used to determine evidence for at least Standards 1, 2, and 7.
1. Description of any state or institutional policies that may influence the application of NCTM standards. (Response limited to 4,000 characters INCLUDING SPACES)

2. Description of the field and clinical experiences required for the program, including the number of hours for early field experiences and the number of hours/weeks for student teaching or internships. Information must also include the qualifications of cooperating teachers and student teaching supervisors. (Response limited to 8,000 characters INCLUDING SPACES)

3. A program of study that outlines the courses and experiences required for candidates to complete the program. The program of study must include course titles and numbers. (This information may be provided as an attachment from the college catalog or as a student advisement sheet.) For post-baccalaureate or master's programs include a graduate advising form or transcript analysis form showing undergraduate mathematics content course requirements aligned to NCTM Mathematics content components.

4. This system will not permit you to include tables or graphics in text fields. Therefore, any tables or charts must be attached as files here. The title of the file should clearly indicate the content of the file. Word documents, pdf files, and other commonly used file formats are acceptable.

5. Candidate Information
Directions: Provide three years of data on candidates enrolled in the program and completing the program, beginning with the most recent academic year for which numbers have been tabulated. Report the data separately for the levels/tracks (e.g., baccalaureate, post-baccalaureate, alternate routes, master's, doctorate) being addressed in this report. Data must also be reported separately for programs offered at multiple sites. Update academic years (column 1) as appropriate for your data span. Create additional tables as necessary. It is extremely important that the number of completers reported on this table is reflected in the data presented for the State Licensure Test and for a Grades/GPA/Transcript Analysis content assessment. Data from those tables should reflect the year the candidate completed, regardless of when the test or coursework was taken.

6. Faculty Information:
Directions: Complete the following information for each faculty member responsible for professional coursework, clinical supervision, or administration in this program. Make sure that those responsible for supervision of program candidates are clearly identified.

SECTION II. LIST OF ASSESSMENTS

In this section, list the 6-8 assessments that are being submitted as evidence for meeting the NCTM standards. All programs must provide a minimum of six assessments. If your state does not require a state licensure test in the content area, you must substitute an assessment that documents candidate attainment of content knowledge in Assessment #1. For each assessment, indicate the type or form of the assessment and when it is administered in the program. The Table appears in the program shell.
Assessments must include:
Assessment #1—State Licensure Test
Assessment #2—Assessment of Content Knowledge in Mathematics
Assessment #3—Candidate Ability to Plan for Mathematics Instruction
Assessment #4—Assessment of Student Teaching in Mathematics
Assessment #5—Candidate Impact on Student Learning
Assessment #6—Additional Assessment to Provide Evidence for Standards

Assessments #7 and #8 are additional optional assessments.

NCTM provides sufficiency of evidence with the standards and components for nationally normed tests used in Assessment 1. In addition, it provides guidelines and templates if the program uses Grades/GPA/Transcript Analysis as a content assessment.

SECTION III. RELATIONSHIP OF ASSESSMENTS TO STANDARDS

Using the chart included in this report form, indicate which of the assessments listed in Section II provide evidence of meeting specific program standards components.

When submitting a revised or response-to-conditions report, if a new assessment replaces one submitted in the initial review report to meet a SPA standard, Section III must be completed.

SECTION IV. EVIDENCE FOR MEETING STANDARDS

Follow the directions provided in Section IV of the template to develop information on the 6-8 key assessments. The key assessments should be required of all candidates. Assessments scoring guides/rubrics and data charts should be aligned with the SPA standards elements/components. This means that the concepts in the SPA standards should be apparent in the assessments and in the scoring guides/rubrics to the same depth, breadth, and specificity as in the SPA standards. Data tables should also be aligned with the SPA standards elements/components. The data should be presented, in general, at the same level they are collected. For example, if a rubric collects data on 10 elements/components [each relating to specific SPA standard(s) indicators], then the data chart should report the data on each of the elements rather than reporting a cumulative score.

For each assessment, attach one document that includes the following items:
 (1) A two-page narrative that includes the following:
   a. A brief description of the assessment and its use in the program (one sentence may be sufficient);
   b. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standard by number, title, and/or standard wording.
   c. A brief analysis of the data findings; and
   d. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording;
 (2) Assessment documentation that includes the following:
   a. The assessment tool itself or a rich description of the assessment (often the directions given to candidates);
   b. The scoring guide/rubric for the assessment; and
   c. Charts that provide candidate data derived from the assessment.

 Note:
   a. All information about one assessment is preferably presented as one file;
   b. There is a limit of 20 attachments
   c. Attachment size can be no larger than 2 MB

SECTION V. USE OF ASSESSMENT RESULTS TO IMPROVE THE PROGRAM

Describe how faculty are using the data from assessments to improve candidate performance and the program, as it relates to content knowledge; pedagogical and professional knowledge, skills, and dispositions; and student learning. Candidate

performance should suggest areas where performance is strong, and those areas that may need further instruction, guidance, and/or field experiences. It is expected that the narrative included in this section specifically refers to data-driven decisions made as a result of the data from candidates on the assessments presented.

SECTION VI. FOR REVISED AND RESPONSE-TO-CONDITIONS REPORTS ONLY

Describe what changes or additions have been made in the report to address the conditions and concerns raised in the original recognition report. List the sections of the report you are resubmitting and the changes that have been made.

Specific instructions for preparing a Revised report are available on the CAEP web site at http://www.caepnet.org/accreditation/caep-accreditation/spa-program-review-policies- and-procedur/guidelines-for-submitting-revised-spa-pr

Specific instructions for preparing a Response to Conditions report are available on the CAEP web site at http://www.caepnet.org/accreditation/caep-accreditation/spa-program-review-policies- and-procedur/guidelines-for-submitting-response-to-co

GENERAL GUIDELINES ON DOCUMENTATION

1. Attachments

Sections I and IV include attachments. A program report can include no more than a total of 20 attachments. A single attachment cannot be larger than 2 MB. The files for each attachment should be prepared as Word, Word Perfect, Excel, or PDF documents. AIMS accepts documents that have been created in the newest version of Word and saved with a ".docx" extension.

2. Character Limits

Character limits have been set based on one page being equivalent to 4000 characters. Character counts include spaces, punctuation, numbers, etc.

3. Formatting Instructions

Note that text boxes in Sections I, II, V, and VI are html-based and will not accept any formatting such as bullets, tables, charts, etc. Be sure that your responses are text-only. If you do need to include a table or a graph in a response to a question, then you must separate that into a unique file and attach in Section I. This restriction does not apply to the documentation for Section IV, since these documents are all uploaded as attachments.

NOTE: CAEP staff may require programs to revise reports that are not aligned with the template instructions regarding format, page limits, or number of attachments. Please note that hyperlinks embedded in report documentation will not be read by reviewers and cannot be used as a means of providing additional information.

Resources on the CAEP website

CAEP has multiple resources on its website to help programs to prepare SPA reports. These are available at

SPA-specific program review templates and resources are available at
http://www.caepnet.org/accreditation/caep-accreditation/spa-standards-and-report-forms

SPECIFIC GUIDELINES FOR NCTM REVIEW

National Recognition Decision Rules

NCTM program review decisions are based on the preponderance of evidence (an overall confirmation that candidates meet standards in the strength, weight, or quality of evidence) at the standard level.

All programs involved in compiling and submitting program reports should take full advantage of **available resources** to support this process at www.nctm.org/caep.

Resources for NCTM Program Report Compiler Training: http://www.nctm.org/Conferences-and-Professional-Development/NCTM-CAEP-Report- Compiler-Training/

Selecting Evidence for Standard 1

Evidence for Standard 1 includes any state-required mathematics content area licensure exams aligned to components of NCTM Standard 1 accompanied by completer performance data from a minimum of two academic years for an initial report or a minimum of one academic year for a response to conditions or revised report. Performance data must include, at minimum, mean and range or standard deviation values.

Many programs use a detailed analysis of course grades or transcript analysis (for post-baccalaureate/graduate programs) to provide evidence of candidates' demonstration of content and mathematical processes. Guidelines for the use of course grades are outlined on the NCTM website. Content-based assessment such as projects, course portfolios, or other course products aligned to the components of NCTM Standard 1 accompanied by candidate performance data can also provide data for Standards 1 and 2.

Evidence supports that at all components are met. Evidence must present at least two assessments to meet this standard. This is typically met with the state licensure test results (Assessment 1), and a second assessment of content.

Selecting Evidence for Standard 2

Evidence for Standard 2 should reflect demonstration of the components by the candidates that reflect the candidates' **own** experiences in using the mathematical processes to expand their own knowledge of the mathematical domains.

Many programs use a detailed analysis of course grades or transcript analysis (for postbaccalaureate programs) to provide evidence of candidates' demonstration of content and mathematical processes. Guidelines for the use of course grades are outlined on the NCTM website. Content-based assessment—such as projects, course portfolio, or other course products aligned to components of NCTM Standard 2 accompanied by candidate performance

data—can also provide data for Standards 1 and 2. Other possible assessments could include specific course-based assessments, portfolios, publications, or presentations that address the components of Standard 2.

Evidence supports that at all components are met. Evidence must present at least two assessments to meet this standard. Typically, institutions use evidence from Assessment 2 and one of the assessments of candidates' teaching performance to meet this standard.

Selecting Evidence for Standard 3
Evidence for Standard 3 may be demonstrated through assessments of planning (lesson/unit plans), observations of teaching (student teaching, internship, practicum, etc.), or other assessments that particularly address how knowledge of students was used when instructional choices were made.

Evidence supports that more than 50 percent of the components are met, including required component 3a. Evidence must present at least one assessment to meet this standard.

Selecting Evidence for Standard 4
Evidence provided for this standard must be *enacted* instruction. A unit plan alone is insufficient; it must actually be implemented in a classroom. The components described in Standard 4 may not be evident in a single day of instruction, but they must be evident within a unit of instruction. For example, procedural fluency may not be represented in a particular day in which a single strategy or task is developed, but a unit of study must make explicit connections between conceptual understanding and procedural fluency. Therefore, a unit plan that was implemented, along with lesson observations and reflections on teaching, would combine to provide evidence across Standard 4 components. Evidence can also be from other teaching performances and reflections, such as student interviews and transcript analysis, or standards performance instruments, such as the edTPA.

Evidence supports that more than 50 percent of the components are met. Evidence must present at least two assessments to meet this standard.

Selecting Evidence for Standard 5
Evidence for Standard 5 must show the full range of the assessment cycle and demonstrate actual implementation of assessment strategies through analysis of the results of data from work with secondary students. The evidence can come from field experiences or student teaching or internships. An assessment of impact on students' learning could include student work samples, performance assessments such as the edTPA, case studies of secondary classrooms, student interviews, and classroom action research projects.

Evidence supports that more than 50 percent of the components are met. Evidence must present at least one assessment to meet this standard.

Selecting Evidence for Standard 6

The possibilities for evidence for Standard 6 are really open and suggest the flexibility in selecting assessments 6–8. The evidence for this standard suggests the documentation of professional development and collaboration as well as the documentation and critique of the conditions of schooling. For example, assessments could include analysis and reflection from teaching that highlight professional goals, artifacts that demonstrate collaboration with families and colleagues, or audits of beliefs regarding classroom/school policies that might advocate for better access/achievement for underrepresented groups and students.

Evidence supports that more than 50 percent of the components are met and component 6a is required. Evidence must present at least one assessment to meet this standard.

Selecting Evidence for Standard 7[1]

Evidence supports that all components are met. Information regarding field experiences comes from Section I, Context #1, #2, and #6 of the program report.

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[1] This standard is not a requirement for CAEP, but it is an NCTM requirement for a program to obtain National Recognition from the Council. The 2020 NCTM Standard 7 for Math programs was not based on the *Guidelines* outlined by CAEP's SPA Standards Review Committee. Instead, it is a specialty licensure area-specific requirement set by NCTM.