To Become
Effective October 15, 2025

Rule 505-3-.97. Steam Education Endorsement

Nature of Amendment(s):

__✓__ **Substantive**
____ **Clarification**
____ **Further Definition**

Discussion:
It is proposed that a new rule, Rule 505-3-.97. STEAM Education Endorsement, be INITIATED with a new name and new number to allow GaPSC-approved EPPs to offer a STEAM Education Endorsement with the possibility of a STEAM micro-endorsement for candidates holding a STEM Education Endorsement.

(1) Purpose. This rule states field-specific content standards for approving endorsement programs that prepare individuals to model STEAM content pedagogy in the field and at the grade level of their base certification, and supplements requirements in Rule 505-3-.01, REQUIREMENTS AND STANDARDS FOR APPROVING EDUCATOR PREPARATION PROVIDERS AND EDUCATOR PREPARATION PROGRAMS.

(2) Definitions.

(a) Transdisciplinary. The integration of knowledge and methods from multiple disciplines, as well as engaging with stakeholders and community perspectives to innovate and solve authentic problems.

(2) In-Field Statement. Completers of the STEAM Endorsement program have strengthened and enhanced competency in Science, Technology, Engineering, the Arts, and Mathematics (STEAM) content, instructional planning, and assessment for teaching students in the field(s) and at the grade levels of their base certificate(s).

(4) Requirements.

(a) A GaPSC approved educator preparation provider may seek approval to offer this field as either a stand-alone endorsement or as an endorsement embedded in a GaPSC-approved initial preparation program or an advanced (degree-only) preparation program. In addition to meeting all applicable approval requirements and standards, embedded endorsement programs must meet requirements specified in paragraph (e) 4. (ix) of GaPSC Educator Preparation Rule 505-3-.01, REQUIREMENTS AND STANDARDS FOR APPROVING EDUCATOR PREPARATION PROVIDERS AND EDUCATOR PREPARATION PROGRAMS.

(b) Approval to offer the STEAM Endorsement qualifies the EPP to recommend for the STEAM Micro-Endorsement, candidates who are actively enrolled in this program and who demonstrate mastery of standards 1 and 5. The STEAM Micro-Endorsement qualifies individuals who hold a STEM Endorsement to teach STEAM Education content in the grade band of their base certification.

(c) To receive approval, a GaPSC-approved educator preparation provider shall offer a preparation program described in program planning forms, catalogs, and syllabi addressing the following standards:

1. The program will prepare candidates who demonstrate their understanding of STEAM education as a transdisciplinary endeavor by demonstrating their ability to apply rigorous content across STEAM and STEAM-related disciplines as indicated by the following:

(i) Candidates will demonstrate a comprehensive understanding of and the ability to integrate STEAM content standards in authentic ways that align to the expectations of grade level state standards;

(ii) Candidates will be able to articulate a clear definition and understanding of what STEAM education is and what it looks like in practice as both transdisciplinary and process driven;

(iii) Candidates will demonstrate the ability to integrate each of the STEAM disciplines as necessary components in answering questions, in investigating local, regional and global issues, and in developing solutions for real-world problems; and

(iv) Candidates will demonstrate knowledge of the benefits of STEAM education for all citizens, enabling them to make informed decisions about challenges facing the next generation, for future STEAM innovation, workforce development and related career opportunities with the skills necessary to be successful in them.

2. The program will prepare candidates who demonstrate understanding of the ways of thinking and habits of mind used in STEAM and STEAM-related disciplines as indicated by the following:

(i) Candidates will demonstrate the ability to think critically, evaluate complex data, draw data-driven conclusions, engage in effective argumentation, and communicate effectively in written and oral formats;

(ii) Candidates will demonstrate the dispositions necessary to be effective transdisciplinary STEAM educators (i.e., life-long learning, value collaborations, flexible, high tolerance for ambiguity, risk taker, innovative, committed to the profession, self-reflective perseverance); and

(iii) Candidates will demonstrate the ability to effectively engage students in using STEAM reasoning abilities, including computational reasoning, model-based reasoning, quantitative reasoning, and engineering design-based reasoning, and complex systems thinking while also integrating artistic and design thinking to enhance creative problem-solving, visual representation, and storytelling in STEAM applications.

3. The program will prepare candidates who understand and demonstrate the role of meaningful collaboration and partnerships as evidenced by the following:

(i) Candidates will demonstrate the ability to work effectively within a STEAM focused multidisciplinary professional learning community to achieve a common goal and to co-plan authentic standard based STEAM experiences and interdisciplinary lessons;

(ii) Candidates will demonstrate the ability to involve community and/or business partners in identifying and solving relevant problems; and

(iii) Candidates will demonstrate the ability to partner with local mathematicians, scientists, engineers, artists, designers, and creative professionals to develop authentic, real-world learning experiences in STEAM.

4. The program will prepare candidates who demonstrate the ability to engage students using STEAM and STEAM-related discipline pedagogical practices as indicated by the following:

(i) Candidates will demonstrate the ability to effectively engage students in process-based thinking to solve open-ended problems or complete design challenges;

(ii) Candidates will demonstrate the ability to effectively engage students in authentic or investigative research to answer relevant questions;

(iii) Candidates will demonstrate the ability to effectively engage students in using STEAM reasoning abilities (i.e., computational reasoning, model-based reasoning, quantitative reasoning, engineering design-based reasoning, and complex systems thinking);

(iv) Candidates will demonstrate the ability to effectively engage students in experiential learning;

(v) Candidates will demonstrate the ability to effectively engage students in project management techniques;

(vi) Candidates will demonstrate proficiency in differentiating instruction related to integrated STEAM concepts;

(vii) Candidates will demonstrate the ability to effectively assess students using transdisciplinary STEAM performance tasks and portfolio assessments, and create rubrics for these assessments;

(viii) Candidates will be able to demonstrate the ability to facilitate student-led learning and to apply knowledge and skills to novel, relevant, and authentic situations;

(ix) Candidates will demonstrate the implementation of authentic teaching and learning strategies, including project-based learning, problem-based learning, and place-based education to promote creative thinking;

(x) Candidates will foster a learning environment where creativity, innovation, and risk-tasking are encouraged; and

(xi) Candidates will demonstrate the ability to facilitate student-led team-based learning with appropriate etiquette.

5. The program will provide candidates with authentic experiences in STEAM and STEAM-related careers and teaching environments (a clinical component) as indicated by the following:

(i) Candidates will show evidence of an interaction with a STEAM related business or externships with STEAM professionals to gain perspective of what it is to work in a STEAM related field;

(ii) Candidates will show evidence of in-person or virtual field-based experiences that include observation of classrooms, collaborative planning, and interviewing of teachers in an integrated STEAM education environment that is evidenced by reflective documentation; and

(iii) Candidates will complete a transdisciplinary STEAM culminating project to include Science, Technology, Engineering, Arts, and Mathematics.

Authority: O.C.G.A. § 20-2-200.