# Single Subject Content Area Pedagogies Course Matrix

**In the matrix below, denote the candidates’ opportunity to learn and master the competencies listed. The required course names and numbers should go across the top of the matrix, replacing the “Course Title and Number” text below. For each competency, note when the program/candidate introduces (I), practices (P), and assesses (A) the competency. Notations may occur under more than one course heading. Each notation (I, P, A) should link to a specific place in the syllabus within that course that demonstrates that this is occurring.**

**Institution Name**

**Program Coordinator Name**

**Program Coordinator Email**

| **Subject Specific Pedagogical Skills for Single Subject Teaching Assignments in:**  **Mathematics** | Course Title and Number1 | Course Title and Number2 | Course Title and Number3 | Course Title and Number4 | Course Title and Number5 | Course Title and Number6 | Course Title and Number7 | Course Title and Number8 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Beginning Single Subject Mathematics teachers demonstrate knowledge of and ability to teach mathematics content aligned with the California State Standards and applicable English Language Development Standards. |  |  |  |  |  |  |  |  |
| 1. The interdisciplinary nature of these standards requires beginning teachers to demonstrate both the capacity and the disposition to collaborate with their colleagues to assure that all students are provided curriculum and instruction that effectively merges literacy within each content area. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers understand the concept that English language and literacy development is a shared responsibility of all content area educators. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers enable students to understand basic mathematical computations, concepts, and symbols; to use them to solve common problems; and to apply them to novel problems. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers help students understand different mathematical topics and make connections among them. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers help students solve real-world problems using mathematical reasoning and concrete, verbal, symbolic, and graphic representations. |  |  |  |  |  |  |  |  |
| 1. They require student collaboration and written and oral communication that demonstrates students' ability to construct logical arguments based on substantive claims, sound reasoning, and relevant evidence. |  |  |  |  |  |  |  |  |
| 1. They provide students the opportunity to use and evaluate strengths and limitations of media and technology as integral tools in the classroom. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers provide a secure environment for taking intellectual risks, model and encourage students to use multiple ways of approaching mathematical problems, and encourage discussion of different solution strategies. |  |  |  |  |  |  |  |  |
| 1. They demonstrate positive attitudes toward mathematics and encourage student curiosity, flexibility, and persistence in solving mathematical problems. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers use developmentally appropriate and diverse strategies to engage students in grades 7–12 to understand mathematics as a logical system that includes definitions, axioms, and theorems, and to understand and use mathematical notation and advanced symbols. |  |  |  |  |  |  |  |  |
| 1. They assign and assess work through progress-monitoring and summative assessments that include illustrations of student thinking, such as open-ended questions, investigations, and projects. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers engage students in the Standards for Mathematical Practice: 1) Make sense of problems and persevere in solving them; 2) Reason abstractly and quantitatively; 3) Construct viable arguments and critique the reasoning of others; 4) Model with mathematics; 5) Use appropriate tools strategically; 6) Attend to precision; 7) Look for and make use of structure; and 8) Look for and express regularity in repeated reasoning. |  |  |  |  |  |  |  |  |
| 1. Beginning teachers assure that students at various English proficiency levels have the academic language needed to meaningfully engage in the content. |  |  |  |  |  |  |  |  |