



# CODED CORRESPONDENCE

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**DATE:**

April 4, 2025

**NUMBER:**

25-03

**TO:**

All Individuals and Groups Interested in the  
Activities of the Commission on Teacher  
Credentialing

**FROM:**

Mary Vixie Sandy  
Executive Director  
Commission on Teacher Credentialing

**SUBJECT: Assembly Bill 2473: Expanded Options for Adding Supplementary and Subject  
Matter Authorizations to Existing General Education Credentials**

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**Summary:**

Assembly Bill (AB) 2473 (Chap. 831, Stats 2024), which took effect September 28, 2024, provided new pathways for educators to add Introductory and/or Specific Supplementary Authorizations and Subject Matter Authorizations to Single Subject and Multiple Subject teaching credentials.

**Key Provisions:**

Prior to the passage of this bill, an educator seeking to add a Supplementary and Subject Matter Authorization to an existing credential was required to demonstrate academic requirements via coursework evaluation or via degree major by providing official transcripts with their application for the authorization. AB 2473 expanded the pathways to meet the academic requirements for Supplementary and Subject Matter Authorizations. Educators may now use one of the following methods:

- 1) pass the corresponding California Subject Examinations for Teachers (CSET) examinations;
- 2) combination of CSET exams with coursework that has been reviewed by an approved preparation program; or

- 3) educators prepared and licensed in another state may request a Supplementary Authorization or Subject Matter Authorization based on holding a comparable authorization on a professional-level, out-of-state teaching license.

A summary of changes to requirements to each authorization type are included in Table 1 below. Additionally, [Appendix A](#) provides details on each subject and their specific requirements.

**Table 1: Previous and Current Requirements**

<b>Authorization Type</b>	<b>Previous Requirements</b>	<b>Additional Requirements</b>
<i>Introductory Supplementary Authorization</i>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units) in the subject</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of all corresponding CSET exams</li> <li>• Combination of CSET exams and coursework</li> <li>• Possession of comparable out-of-state license</li> </ul>
<i>Specific Supplementary Authorization</i>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units) in the subject</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of all corresponding CSET exams</li> <li>• Possession of comparable out-of-state license</li> </ul>
<i>Introductory Subject Matter Authorization</i>	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of all corresponding CSET exams</li> <li>• Combination of CSET exams and coursework</li> <li>• Possession of comparable out-of-state license</li> </ul>
<i>Specific Subject Matter Authorization</i>	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of all corresponding CSET exam for select subjects</li> <li>• Possession of comparable out-of-state license</li> </ul>

*Note Individuals must hold a Single or Multiple Subject Teaching Credential or apply for one in tandem with one of these authorizations in order to be considered eligible to earn these authorizations.*

### **New Options**

#### *Out of State Licensure*

In most cases, a holder of a professional level out-of-state license will be able to earn a [full Single Subject Teaching credential](#) in California. However, some out-of-state licenses are not fully transferable due to lack of alignment with either 1) the statutory subject area or, 2) grade level. The expanded option made available by AB 2473 gives individuals that hold an out-of-state license an opportunity to transfer it to a Supplementary or Subject Matter Authorization

instead. Whenever an authorization listed on an out-of-state license aligns with a Supplementary or Subject Matter Authorization, but not one of the California statutory subject areas (listed on the [Commission's website](#)), the applicant may request the appropriate Supplementary or Subject Matter authorization.

The following examples illustrate how various out-of-state teaching licenses align with and transfer to California teaching credentials.

- An educator holds an out-of-state license in Elementary Education (Self-Contained General Education) and also holds a Middle Grades Mathematics authorization through grade 8. The mathematics authorization in middle grades authorizes departmentalized instruction; therefore, it can be used to meet subject matter competence to add an Introductory Supplementary Authorization in Mathematics to the Multiple Subject Credential.
- An educator holds an out-of-state license in Secondary Education General Science grades 9-12 and also holds a Middle Grades Mathematics authorization through grade 8. The educator would be eligible to add an Introductory Supplementary Authorization in Mathematics to a Single Subject Credential in Foundational-Level General Science.

#### *CSET Examinations*

With the additional options to qualify for a Supplementary or Subject Matter Authorization, individuals may take specific CSET exams to expand their authorizations. A detailed breakdown of the required exam(s) necessary to qualify for a Supplementary or Subject Matter Authorization can be found in the appendix of this document. While Introductory Supplementary Authorizations require a full series of exams to qualify, some specific authorizations require a CSET exam in which the specific subject is covered within the domain. The domains represent a summary of the full range of the content adopted by the State Board of Education that comprise the K-12 student content standards, within each of the individual content areas.

Not all authorizations have a corresponding CSET examination, so a careful review of the appendix is encouraged. Additionally, the CSET examination titles, test content information, and passing scores are listed on the Commission's [Subject Matter Competency by Exam webpage](#). Additional information can also be found on leaflet [CL-674S](#) and in [Appendix A](#).

Educators who want to obtain the full Single Subject credential must pass all the CSET subtests in the subject area requested in addition to meeting all other requirements described in leaflet [CL-621A](#).

#### *Combination of Coursework and Examinations*

The Commission does not provide evaluations for educators who are using a combination of coursework and CSET examinations to meet subject matter requirements. Those interested in this new option must have their coursework and examination results evaluated by a Commission-approved program of professional preparation. Applicants will need to contact an approved program to request a review of their coursework and obtain an official letter verifying

subject matter has been met. The official letter will need to be included with the application for the Supplementary or Subject Matter Authorization.

The letter must be issued by the Commission-approved program that completed the applicant's coursework evaluation. It must specify the type of authorization the applicant is seeking and verify that the individual satisfied subject matter competence requirements for that authorization. The Commission's [Approved Institutions and Programs](#) dashboard may be used to locate approved programs for this purpose.

Programs must review the domains covered by the CSET exam and ensure that any remaining subject matter requirements are met, whether through the examination, through coursework, or through a combination of both. Programs are encouraged to use the [Subject Matter Authorization Guidebook](#) and [Supplementary Authorization Guidebook](#) when completing their review, as there are specific subject criteria for most subjects. For example, an Introductory Math authorization requires proficiency in Probability or Statistics for issuance. Reviewing these resources before evaluating completed coursework and/or examination results ensures that educators demonstrate subject matter competency across all required areas.

### **How to Apply**

#### *Submitting a Paper Application for a Supplementary or Subject Matter Authorization*

If an educator has **already been issued** a Single Subject or Multiple Subject teaching credential and are adding a Supplementary and/or Subject Matter Authorization, the following must be submitted to the Commission by **mail**:

1. Completed application ([form 41-4](#))
2. Official transcripts verifying qualifying degree major or coursework completed, copy of out-of-state teaching credential, CSET Exam score report, or an official letterhead verifying subject matter from a program if using combination of CSET exams and coursework.
3. Application [processing fee](#)

#### *Submitting an Online Application for a Supplementary or Subject Matter Authorization.*

If an educator **has not been issued** a Single Subject or Multiple Subject teaching credential and will be applying simultaneously for the credential and Supplementary and/or Subject Matter Authorization, an **online** application must be submitted to the Commission.

Educators who wish to submit direct online Multiple Subject or Single Subject credential applications based on out-of-state preparation must first create an account in [CTC Online](#) and log in to access the application. Instructions on how to create an account can be found on the Create Account webpage. Educators can also find instructions on how to submit the application at the Direct Application Submission webpage.

When completing the online direct submission process, all required fields must be completed: *General Application Category, Type of Credential/Permit Requested, Authorization/Subject*, and

*Preparation Route.* Each subsequent field will not be visible until the field before it has been completed, at which point it will be generated automatically.

- Request *Single or Multiple Subject Teaching Credential for Type of Credential/Permit Requested* and *More Than One Subject for Authorization/Subject*, an additional text field will be generated. Applicants **MUST type in both** the full subject and Supplementary or Subject Matter Authorization they are requesting in this text field. For example, “Single Subject in Dance **and** Subject Matter Authorization in Introductory English”

For the *Preparation Route* field, applicants must select the route that best applies to their experience. Educators who are applying on the basis of out-of-state preparation may fall under two routes:

1. Route 1: Applicants with less than two years of out-of-state teaching experience
2. Route 2: Applicants with two or more years of out-of-state teaching experience

During the direct submission process, educators will have the opportunity to upload all supporting documentation that is required for the credential.

### **Credential Considerations**

Supplementary and Subject Matter Authorizations are not full authorizations, as they are meant to be an enhancement to the educator’s existing preparation and do not require the same amount of preparation for issuance. These authorizations are limited in the following ways:

- Introductory Supplementary Authorization added to a Single Subject teaching credential: authorizes instruction of curriculum designed for students in grade 9 and below.
- Supplementary Authorization added to a Multiple Subject teaching credential: authorizes instruction to students in grade 9 and below.
- Specific Supplementary Authorization added to a Single Subject teaching credential: authorizes instruction at all grade levels but is limited in scope to the specific subject listed on the authorization.
- Subject Matter authorization added to a Single Subject or Multiple Subject teaching credential: authorizes instruction of curriculum designed for students in grade 9 and below.
- Introductory Subject Matter Authorization added to a Single Subject or Multiple Subject teaching credential: authorizes instruction of curriculum designed for students in grade 9 and below.

The dependence of this authorization on a full document being issued means two things. First, educators must hold a Multiple or Single Subject credential or be applying for a Multiple or Single Subject credential in tandem with an application requesting a Supplementary or Subject Matter authorization in order for it to be issued. Supplementary and Subject Matter authorizations cannot be issued as standalone authorizations and credentials cannot be issued with one of these alone.

Second, applicants and the Local Education Agencies (LEAs) that assist them should always review qualifications and ensure that the applicant is not otherwise qualified for a full credential authorization prior to applying. To do so, current credential holders should review [leaflet CL-621A](#), *Adding a Teaching or Content Area to Multiple and Single Subject Credentials*, to ensure that they do not qualify for a full authorization. The primary difference between earning a full authorization and one of the more limited Supplementary or Subject Matter authorizations is a three-semester-unit methodology course directly related to teaching in a self-contained classroom or departmentalized setting in the specific content area sought.

Incoming out-of-state or out-of-country applicants should also ensure they are not otherwise qualified for a full credential prior to applying for a more limited Supplementary or Subject Matter authorization. Applicants can apply for the Supplementary or Subject Matter authorization in tandem with the full authorization.

### **Impacts**

#### *Applicants*

Authorizations can be added to an existing Multiple Subject or Single Subject Credential. Out-of-state applicants who are initially applying for a Multiple Subject or Single Subject Teaching Credential may apply for an Introductory Supplementary Authorization or Subject Matter Authorization at the same time.

The new options made available by AB 2473 provide applicants with pathways to use existing CSET examinations that correspond to an introductory authorization to add that authorization without investing additional time and expense to complete 10 semester units of upper division coursework or 20 semester units of combined lower division and upper division coursework. They also provide a transition pathway to later obtain a full Single Subject Teaching Credential in a statutory subject authorization after completing the remaining requirements to add the Single Subject authorization as required under Title 5, California Code of Regulations §80499.

Applicants using a combination of coursework and CSET examinations to meet the requirements must have their subject matter verified by a Commission-approved program of professional preparation. Applicants will need to contact an approved program to request a review of their coursework and obtain an official letter verifying subject matter has been met.

#### *Local Education Agencies*

The new provisions authorized by AB 2473 allow approved preparation programs to review coursework for subject matter competence requirements to satisfy the requirements for a Supplementary or Subject Matter Authorization. Local Education Agencies that sponsor an approved preparation program and who consent to provide such coursework reviews may submit official subject matter verification letters to applicants who wish to add introductory content to existing general education credentials.

### *Program Sponsors*

The new provisions authorized by AB 2473 allow approved preparation programs to review coursework for subject matter competence requirements to be used to satisfy the requirements for a Supplementary or Subject Matter Authorization. Program sponsors that consent to provide such coursework reviews may submit official verification letters to applicants who wish to add introductory content to existing general education credentials.

### **Background**

In 2021, the passage of AB 130 (Chap. 44, Stats. of 2021) established several additional pathways to meet subject matter competence requirements, as follows:

- Passage of CSET exams;
- Acceptable degree major;
- Coursework;
- Combination of coursework review and CSET exams;
- Subject Matter Program; and
- Out-of-State Licensure.

These changes only applied to full credentials, including Single and Multiple Subject credentials. Limited added authorizations like Supplementary and Subject Matter Authorizations remained confined to coursework to satisfy academic requirements. The passage of AB 2473 expands and aligns the subject matter requirements for Supplementary and Subject Matter Authorizations with the changes enacted by AB 130.

### **Important Dates**

AB 2473 became effective 9/28/2024 (Urgency Clause)

### **Resources**

[AB 2473](#)

California Education Code §§44225, 44256, 44257, and 44349

### **References**

[Supplementary Authorizations-Single Subjects \(CL-603\)](#)

[Supplementary Authorizations \(CL-629\)](#)

[Subject Matter Authorization \(CL-852\)](#)

[Subject Matter Competence by Exam webpage](#)

[Appendix A: Supplementary Authorizations for Single Subject Teaching Credentials](#)

[Appendix B: Supplementary Authorizations for Multiple Subject Teaching Credentials](#)

[Appendix C: Introductory Subject Matter Authorizations for Single Subject and Multiple Subject Teaching Credentials](#)

[Appendix D: Specific Subject Matter Authorizations for Single Subject and Multiple Subject Teaching Credentials](#)

**Contact Information**

Questions regarding credential requirements and application submissions may be directed to the Commission's Certification Division at [Contact Us | Educator Resources](#).



## Appendix A

### Supplementary Authorizations for Single Subject Teaching Credentials

Authorization	Available Options	Expanded Options
Introductory Agriculture	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: animal science, plant science, and agricultural mechanics.</p>	<ul style="list-style-type: none"> <li>• CSET exams (172,173, and 174)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory Art	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: drawing and painting, art history or appreciation, and crafts.</p>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory Business	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Business management, business marketing or introduction to business, computer concepts and applications, economics, business communications or business English, and accounting.</p>	<ul style="list-style-type: none"> <li>• CSET exams (175, 176 and 177)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory Computer Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Computational thinking, computing practice and programming, computers and communication devices, and impacts of computing (e.g., social, ethical,</p>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>

	<p>legal) – impacts of computing topics may be included within courses that cover any of the other content areas.</p>	
<p>Introductory Dance</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Jazz dance, contemporary dance, and dance theory.</p>	<ul style="list-style-type: none"> <li>• CSET exams (221 and 222)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory English</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Composition, literature, and grammar or language structure.</p>	<ul style="list-style-type: none"> <li>• CSET exams (105, 106, 107, and 108)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory Health Science</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Substance abuse (including alcohol, drug, and tobacco); family life education (including human sexuality, HIV/AIDS, and sexually transmitted diseases); nutrition; comprehensive school health systems or programs; and health education theory, behavior, or foundations.</p>	<ul style="list-style-type: none"> <li>• CSET exams (178, 179, and 180)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory Home Economics</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Food and nutrition, clothing, child development, and family life and parenting (Course of study must include course work in both food and nutrition, but the areas may be covered with one course; the same is true for the family life and parenting area; at least one course must include a laboratory component).</p>	<ul style="list-style-type: none"> <li>• CSET exams (181, 182, and 183)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

<p>Introductory Industrial Arts</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Drafting or graphic arts, woods or metals, and electricity or electronics.</p>	<ul style="list-style-type: none"> <li>• CSET exams (184 and 185)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Industrial and Technology Education (ITE) or comparable authorization on out-of-state license</li> </ul>
<p>Introductory Mathematics</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: College algebra, geometry, and development of the real number system or introduction to mathematics; or three courses in calculus or other mathematics courses for which intermediate algebra and geometry are prerequisites.</p>	<ul style="list-style-type: none"> <li>• CSET exams (211, 212, and 213)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory Music</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Vocal music, instrumental music, music history or appreciation, and music theory</p>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory Physical Education</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Team sports and games; fundamental and creative movement skills (such as dance and gymnastics); human movement, motor development, and/or motor learning; and individual, dual, non-traditional, and global sports and games (such as aquatics, conditioning, and archery).</p>	<ul style="list-style-type: none"> <li>• CSET exams (129, 130, and 131)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
<p>Introductory Science</p>	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (215)</li> <li>• Combination of CSET and coursework evaluation</li> </ul>

	<p>Units must include at least one course in each of the following: Biological sciences, chemistry, geosciences, and physics (The course work must include a one-year sequence of courses in at least two of the listed subject areas, and at least one course must include a laboratory component).</p>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory Social Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: United States history, California history, world history, geography, and United States government.</p>	<ul style="list-style-type: none"> <li>• CSET exams (114, 115, and 116)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory Theater	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Acting, directing and stagecraft.</p>	<ul style="list-style-type: none"> <li>• CSET exams (223 and 224)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Introductory World Languages	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> <li>• Units must include at least one course in each of the following: Grammar, composition, conversation, and literature, plus oral language proficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams - For appropriate CSET exams, review the language-specific information on <a href="#">information leaflet CL-674S</a>.</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

### Specific Supplementary Authorizations for Single Subject Teaching Credentials

Authorization	Available Options	Expanded Options
Accounting including Finance	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 176</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Agricultural Mechanics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Animal Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 173</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Anthropology	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Auto Mechanics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Biological Sciences [2]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 217</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Chemistry [2]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 218</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Child Development (Home Economics) [3]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 181</li> </ul>

	<ul style="list-style-type: none"> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Clothing and Textiles (Home Economics) [3]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 183</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Comparative Political Systems and International Relations	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Computer Science [4]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Consumer Education (Home Economics)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 183</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Crafts, including Jewelry and Ceramics (Art)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Dance	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (221 and 222)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Drafting	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Economics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 116</li> </ul>

	<ul style="list-style-type: none"> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Economic and Consumer Education	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 116</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Electronics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
English Composition	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (105 and 107)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Family Life and Parenting (Home Economics)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 180</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Family Life Education including Drug, Alcohol and Tobacco Use Prevention (Health Science)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (179 and 180)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Food and Nutrition (Home Economics) [3]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 182</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Forestry and Horticulture	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 172</li> <li>• Comparable authorization on out-of-state license</li> </ul>

Geography	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (114 and 115)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Geosciences [2]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams 219</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Graphic Arts	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Industrial Crafts and Plastics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Instrumental Music	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Interior Design (Home Economics) [3]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 183</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Journalism	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Literature	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (105 and 107)</li> </ul>



	<ul style="list-style-type: none"> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Marketing/Entrepreneurship	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 175</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Metals (Industrial Arts)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Office Technologies including Word Processing and Business Communications	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Ornamental Horticulture	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 172</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Painting and Drawing	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 229</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Photography	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Physics [2]	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 220</li> <li>• Comparable authorization on out-of-state license</li> </ul>

Plant Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 172</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Plastics (Industrial Arts)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Psychology	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Sociology	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Speech	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 108</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Theater	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (223 and 224)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
US Government and US Civics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 116</li> <li>• Comparable authorization on out-of-state license</li> </ul>
US History and California History	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (115 and 116)</li> <li>• Combination of CSET and coursework evaluation</li> </ul>

		<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Vocal Music	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (215 and 217)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Woods (Industrial Arts)	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
World History	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 114</li> <li>• Comparable authorization on out-of-state license</li> </ul>

*Note [2]: The specific subjects in science must include the components for that area as shown below. At least one course must include a laboratory component.*

*Biological Sciences: Molecular and Cellular Biology, Biology of Organisms, and Evolution.*

*Chemistry: Structure and Stability, and Chemical Reactions.*

*Geosciences: Astronomy, Geology, Meteorology, and Oceanography.*

*Physics: Energy-Mechanics, Energy-Heat, Energy-Electricity & Magnetism, Wave Motion, and Atomic & Nuclear Physics.*

*Note [3]: Subjects marked must include a laboratory component.*

*Note [4]: The specific subject Computer Science must include the following components: computer programming, data structures and algorithms, digital devices, systems and networks, software design, and impacts of computing (e.g., social, ethical, legal) – impacts of computing topics may be included within courses that cover any of the other content areas.*

*Note [5]: Family Life Education, including Drug, Alcohol, and Tobacco Use Prevention (Health Science), must include the following components: Sexually Transmitted Diseases including HIV/AIDS, Human Development and Human Sexuality, Parenting Education, Violence Prevention, and Drug, Alcohol, and Tobacco Use, Prevention, and Cessation.*

## Appendix B

### Supplementary Authorizations for Multiple Subject Teaching Credentials

Authorization	Available Options	Expanded Options
Agriculture	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: animal science, plant science, and agricultural mechanics.</p>	<ul style="list-style-type: none"> <li>• CSET exams (172,173, and 174)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Art	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: drawing and painting, art history or appreciation, and crafts.</p>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Business	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Business management, business marketing or introduction to business, computer concepts and applications, economics, business communications or business English, and accounting.</p>	<ul style="list-style-type: none"> <li>• CSET exams (175, 176 and 177)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Computer Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Computational thinking, computing practice and programming, computers and communications devices, and impacts of computing (e.g., social, ethical, legal) – impacts</p>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>

	<p>of computing topics may be included within courses that cover any of the other content areas.</p>	
Dance	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Jazz dance, contemporary dance, and dance theory.</p>	<ul style="list-style-type: none"> <li>• CSET exams (221 and 222)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
English	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Composition, literature, and grammar or language structure.</p>	<ul style="list-style-type: none"> <li>• CSET exams (105, 106, 107, and 108)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Health Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Substance abuse (including alcohol, drug, and tobacco); family life education (including human sexuality, HIV/AIDS, and sexually transmitted diseases); nutrition; comprehensive school health systems or programs; and health education theory, behavior, or foundations.</p>	<ul style="list-style-type: none"> <li>• CSET exams (178, 179, and 180)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Home Economics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Food and nutrition, clothing, child development, and family life and parenting (Course of study must include course work in both food and nutrition, but the areas may be covered with one course; the same is true for the family life and parenting area; at least one course must include a laboratory component).</p>	<ul style="list-style-type: none"> <li>• CSET exams (181, 182, and 183)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

Industrial Arts	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Drafting or graphic arts, woods or metals, and electricity or electronics.</p>	<ul style="list-style-type: none"> <li>• CSET exams (184 and 185)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Industrial and Technology Education (ITE) or comparable authorization on out-of-state license</li> </ul>
World Languages	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> <li>• Units must include at least one course in each of the following: Grammar, composition, conversation, and literature, plus oral language proficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams - For appropriate CSET exams, review the language-specific information on <a href="#">information leaflet CL-674S</a>.</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: College algebra, geometry, and development of the real number system or introduction to mathematics; or three courses in calculus or other mathematics courses for which intermediate algebra and geometry are prerequisites.</p>	<ul style="list-style-type: none"> <li>• CSET exams (211, 212, and 213)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Music	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Vocal music, instrumental music, music history or appreciation, and music theory</p>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Physical Education	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Team sports and games; fundamental and creative movement skills (such as dance and gymnastics); human movement, motor development, and/or motor</p>	<ul style="list-style-type: none"> <li>• CSET exams (129, 130, and 131)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

	learning; and individual, dual, nontraditional, and global sports and games (such as aquatics, conditioning, and archery).	
Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Biological sciences, chemistry, geosciences, and physics (The course work must include a one-year sequence of courses in at least two of the listed subject areas, and at least one course must include a laboratory component).</p>	<ul style="list-style-type: none"> <li>• CSET exam 215</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Social Science	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: United States history, California history, world history, geography, and United States government.</p>	<ul style="list-style-type: none"> <li>• CSET exams (114, 115, and 116)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Theater	<ul style="list-style-type: none"> <li>• 20 semester units (10 if upper-division units)</li> <li>• Degree major directly related to the subject</li> </ul> <p>Units must include at least one course in each of the following: Acting, directing and stagecraft.</p>	<ul style="list-style-type: none"> <li>• CSET exams (223 and 224)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

### Appendix C

#### Introductory Subject Matter Authorizations for Single Subject and Multiple Subject Teaching Credentials

Authorization	Previous Requirements	Expanded Options
Art	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: art history including aesthetics and appreciation, two-dimensional art including drawing, painting, and printmaking, three-dimensional art including sculpture and ceramics, and photography/computer generated imagery</p>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Dance	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: jazz dance, contemporary dance, and dance theory</p>	<ul style="list-style-type: none"> <li>• CSET exams (221 and 222)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
English	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: grammar or language structure, advanced composition, speech, and literature</p>	<ul style="list-style-type: none"> <li>• CSET exams (105, 106, 107, and 108)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas:</p>	<ul style="list-style-type: none"> <li>• CSET exams (211, 212, and 213)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>



	algebra, advanced algebra, geometry, probability or statistics, and development of the real number system or introduction to mathematics	
Music	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: vocal music including the analysis of repertoire and literature appreciation for developing musicians, instrumental music including the analysis of repertoire and literature appreciation for developing musicians, aural musicianship, keyboard, music history including music appreciation, world music, conducting and music theory</p>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Science	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of six semester units of coursework in each of the following content areas: biological sciences, chemistry, geosciences, and physics</p>	<ul style="list-style-type: none"> <li>• CSET exam 215</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Social Science	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: United States history, California history, world history, world civilization or world cultures, physical geography, and United States government</p>	<ul style="list-style-type: none"> <li>• CSET exams (114, 115, and 116)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Theater	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (223 and 224)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

	<p>Units must include a minimum of three semester units of coursework in each of the following content areas: acting, directing and stagecraft</p>	
<p>World Languages</p>	<p>32 semester units of coursework in the subject or a degree major in a directly related subject.</p> <p>Units must include a minimum of three semester units of coursework in each of the following content areas: grammar, composition, culture, conversation, and literature</p>	<ul style="list-style-type: none"> <li>• CSET exams - for appropriate CSET exams, review the language-specific information on <a href="#">information leaflet CL-674S</a>.</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license.</li> </ul>

## Appendix D

### Specific Subject Matter Authorizations for Single Subject and Multiple Subject Teaching Credentials

Authorization	Previous Requirements	Expanded Options
Art History/Appreciation	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Biological Sciences	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 217</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 218</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Civics/Government	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 116</li> <li>• Comparable authorization on out-of-state license.</li> </ul>
Dance	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (221 and 222)</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Drama/Theatre	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (223 and 224)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Economics (Social Science)	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 116</li> <li>• Comparable authorization on out-of-state license</li> </ul>
English Composition	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (105 and 107)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>

Geography	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (114 and 115)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license.</li> </ul>
Geosciences	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 219</li> <li>• Comparable authorization on out-of-state license</li> </ul>
History	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> <li>• Coursework must include 16 semester units in world history and 16 semester units in United States history.</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (114, 115, and 116)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license.</li> </ul>
Instrumental Music	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Literature	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (105 and 107)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Photography	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license.</li> </ul>
Physics	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 220</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Plant Science	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exam 172</li> <li>• Comparable authorization on out-of-state license.</li> </ul>
Three-Dimensional Art	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> </ul>

		<ul style="list-style-type: none"> <li>• Comparable authorization on out-of-state license</li> </ul>
Two-Dimensional Art	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (229 and 230),</li> <li>• Combination of CSET and coursework verified via program evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>
Vocal Music	<ul style="list-style-type: none"> <li>• 32 semester units of coursework in the subject</li> <li>• Degree major in a directly related subject</li> </ul>	<ul style="list-style-type: none"> <li>• CSET exams (226 and 227)</li> <li>• Combination of CSET and coursework evaluation</li> <li>• Comparable authorization on out-of-state license</li> </ul>