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# 3B

## Information

### *Educator Preparation Committee*

### Discussion of the Subject Matter Requirements for Teaching Credentials

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**Executive Summary:** This agenda item provides information on California's statutory subject matter requirements for preliminary teaching credentials and discusses options for reviewing this system.

**Recommended Action:** For information only

**Presenters:** Teri Clark, Director, and Phyllis Jacobson, Administrator, Professional Services Division

#### Strategic Plan Goal:

##### *I. Educator Quality*

- b) Develop, maintain, and promote high quality authentic, consistent educator assessments and examinations that support development and certification of educators who have demonstrated the capacity to be effective practitioners.

September 2018

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# Discussion of the Subject Matter Requirements for Teaching Credentials

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## Introduction

This agenda item provides information on California’s statutory subject matter competency requirement for preliminary teaching credentials and discusses options for demonstrating subject matter competence that could be developed for future California teachers.

## Background

In recent years, the Commission has undertaken a review of the teacher preparation system for California credential candidates which led to the adoption of revised teacher preparation program standards for both general and special education teachers, Teaching Performance Expectations, Performance Assessment Design Standards, redesign of the California Teaching Performance Assessment (CalTPA), and a comprehensive review and update of the accreditation system. Given the recent revisions in the teacher preparation system, it would be timely to also review the laws, regulations and requirements that shape the subject matter competency requirement for candidates seeking a California preliminary Multiple Subject, Single Subject and/or Education Specialist teaching credential.

This agenda item is organized in two parts. Part 1 reviews the statutory requirements that govern the current system of establishing the subject matter requirements expected of candidates and verifying that prospective teachers are subject matter competent in their chosen credential area. Part 2 provides a set of questions that could guide a review of the current subject matter competency requirement.

## Part 1: The Statutory Basis for California’s Subject Matter Competency Requirement

### What is California’s Subject Matter Competency Requirement?

Pursuant to California Education Code [§44259](#) and [44280](#), teaching credential candidates in California are required to demonstrate competency in the subject matter they will be authorized by their credential to teach. This is known as the “subject matter competency requirement.” Also pursuant to Education Code ([§44281](#)), multiple subject, single subject, and education specialist teaching credential candidates must meet the subject matter requirement prior to being assigned to a classroom as an intern or a student teacher.

In California, a distinction is made between the subject matter knowledge that serves as a foundation for each type of teaching credential issued by the Commission and the content-specific pedagogy and other preparation completed as part of the teacher preparation program such as basic lesson planning, assessing learning, teaching English learners, working with students with disabilities, using technology to enhance learning, classroom management,

understanding the impact of the whole child, mental health, social-emotional learning and culturally relevant teaching that is also applicable to teaching that content to students. Other than those enrolled in integrated undergraduate teacher preparation programs, candidates typically learn the content undergirding their credential field during the undergraduate years in coursework outside and prior to the teacher preparation program. Candidates' content pedagogical learning typically takes place after the baccalaureate degree, within the teacher preparation program sequence described above.

As set forth in current statute, candidates are expected to demonstrate content knowledge prior to acquiring pedagogical content knowledge. Accordingly, a candidate must demonstrate he or she has content knowledge of the subject they will be teaching at a different time and within a different program or examination than his/her demonstration of knowledge of how to teach that content effectively to K-12 students (pedagogy). The Commission has developed a comprehensive set of examinations of subject matter knowledge via the [California Subject Examinations for Teachers](#) (CSET), and of candidate application of that knowledge via a Commission-approved Teaching Performance Assessment, which focuses on the pedagogical content knowledge and skill of prospective teachers. In the majority of other states, because the development of subject matter content and pedagogical knowledge are often integrated into a single program, the assessment of content knowledge is done at or near the completion of the program and the examination combines assessing content knowledge and content-specific pedagogical knowledge. A graphic depicting California's Learning to Teach System is provided in [Appendix A](#) of this item.

### **Current Candidate Routes to Meeting the Subject Matter Competency Requirement**

The distinction between development of content knowledge and pedagogical content knowledge has been the subject of debate in California for many decades. The Fischer Act of 1961 established the requirement that teacher candidates complete an academic degree not in education followed by a "fifth year of study" focused on pedagogical preparation, and the Ryan Act of 1970 laid the groundwork for the adoption of a statutory requirement in 1976 that candidates must pass subject matter examination prior to completing preparation and earning a preliminary teaching credential. Education Code [§44259](#) allows two routes for candidates to satisfy the subject matter competency requirement:

- 1) Pass a Commission-approved subject matter examination in the content of the credential sought, or
- 2) Complete a Commission-approved subject matter preparation program (SMPP) in the content of the credential sought.

With regard to the subject matter examinations, and consistent with the distinction between content and pedagogy, statute (EC [§44291](#)) prescribes that the examinations are to be "...instruments whose purpose is to measure achievement and shall be used solely to measure objective knowledge of subject matter."

With regard to subject matter preparation programs, EC [§44311](#) states that the standards for program quality and effectiveness governing SMPPs that waive the subject matter examination must “be consistent with the assessments and examinations of subject matter knowledge and competence adopted by the Commission.” The Commission has implemented this requirement for consistency by requiring credential candidates who choose to pass a subject matter exam and candidates who choose to complete a Commission-approved SMPP to demonstrate subject matter competence across the same set of Subject Matter Requirements (SMRs) as applicable to each credential content area.

There is an additional option for teacher candidates seeking to meet the subject matter competence requirement by completing a Commission-approved subject matter program. Section [80094](#) of Title 5 of California Code of Regulations provides that any regionally accredited California institution of higher education (IHE) that offers a Commission-approved SMPP is authorized to determine the equivalence of courses or programs a student has completed at another institution that does not offer a Commission-approved subject matter program in that credential content area. Candidates may request equivalency from a SMPP as long as: (1) the candidate earned his or her degree in the same major as the subject area for which equivalence is being sought, and (2) neither the IHE where the candidate earned his or her degree nor the IHE where the candidate is completing his or her teacher preparation program offer a SMPP in the subject area for which equivalence is being sought. Commission-approved SMPPs are not required to evaluate and grant equivalency to candidates, so this option is only available when SMPPs choose to take on this additional responsibility. Candidates are typically charged a fee for this review by the institution offering the approved subject matter program.

In accordance with statute, this distinction between content knowledge and content pedagogical knowledge has been reflected in the Commission’s subject matter examinations and subject matter program standards, which are content-focused, and in the teacher preparation program standards and teaching performance expectations, where content-pedagogy along with instructional applications of content pedagogy are key focii.

The majority of teacher candidates choose the examination route to meet the subject matter requirement. [Appendix B](#) provides five years of data concerning the number of candidates choosing the examination route and the subject matter program route across the different content areas. As shown in the table, 76 percent of English single subject candidates, 99 percent of foundational mathematics candidates, 98 percent of foundational level general science candidates, and 72 percent of world language candidates over the past five years have chosen the examination route.

The decision whether to seek approval for a subject matter program is an institutional decision and not all institutions choose to develop a subject matter program. Institutions that do offer a program route to candidates have determined that there is a local demand for such programs and that there is faculty interest in pursuing approval. As a result, the full range of subject matter programs is not available to all students in all subject areas and in all portions of the

state, which may influence the number of candidates who choose the examination route rather than the program route. [Appendix C](#) provides information about the number and range of Commission-approved subject matter programs currently available to candidates. In addition, as documented by the Commission's Title II Report, which indicated that the average age of new teachers in California is approximately 33 years old, many new teachers are career-changers or those who decide at a later age that they want to become teachers. These candidates are reluctant to take extra classes that a subject matter program would require, and thus they tend to choose the examination option. Another factor in candidate choice may also be that candidates who decide later in their undergraduate careers that they want to teach may attempt the examination route as a faster, more expeditious route to meeting the subject matter requirement than taking additional coursework. Recent growth in the development of integrated undergraduate degree and credential programs may shift the balance of candidates selecting the program route over the examination route over time.

### **Content Currently Included in the Commission's Subject Matter Requirements**

Statute requires that subject matter program standards and the subject matter examinations be aligned with the academic content and performance standards adopted by the State Board of Education for public K-12 students (EC [§44259\(b\)\(5\)](#)). Consistent with statute, the California K-12 student content and performance standards have served as the basis for determining the content adopted by the Commission to define the SMRs for each credential content area. The SMRs are used to develop the subject matter examinations and to define the content that must be addressed within Commission-approved subject matter programs.

The Commission's Executive Director appoints advisory panels of California content experts to assist with the process of determining the scope of the SMRs for each content area. The process for defining the Commission's subject matter requirements includes reviewing the applicable K-12 student content standards, organizing the main ideas into domains of content that teacher candidates should be expected to know, developing subdomains to further organize the content into groups of main ideas, and developing specific descriptive statements that clarify the range of content of most importance within the field that prospective teacher candidates should know. At each step of the process, California content experts, both faculty in the arts or science field as well as current teachers, make determinations as to whether a given domain, subdomain, and/or descriptive statement of content within the field is:

- (a) sufficiently broad rather than narrowly focused on specific pieces of information;
- (b) current in the content field;
- (c) job-related; and
- (d) necessary for teachers to know on the first day on the job.

Once developed, the draft SMRs are released for field review, revised by the California content experts as needed, and recommended to the Commission for review and adoption. Once adopted by the Commission, subject matter examinations that assess candidate knowledge of the SMRs are developed and programs are developed or revised to align their content with them. The SMRs are not reflected in the Commission's teacher preparation program standards or Teaching Performance Expectations since these documents address content-specific

pedagogy along with multiple other related teaching competencies, and candidates are largely expected to have met the subject matter competency requirement prior to beginning their clinical experiences in teacher preparation. In short, candidates' demonstration of competency in their subject area serves as a foundation for their application of that knowledge during teacher preparation and clinical practice.

### **How California Currently Defines Candidate Subject Matter Competency**

Statute prescribes the following regarding how to determine subject matter competency of credential candidates. EC [§44281](#) states that “The commission shall select, administer, and interpret subject matter examinations, which shall be a prerequisite for assignment to assure minimum levels of subject matter knowledge by all certified personnel regardless of the pattern and place of preparation.” Statute thus takes a “minimum competency” approach, requiring the Commission to set a minimum standard that defines the acceptable level of required subject matter knowledge for the credential sought.

Consistent with statute, the Commission currently sets a minimum passing score standard for the subject matter examinations, on the basis of a standard setting study using data from actual administrations of the examinations with candidates. For the SMPPs, the acceptable level of candidate competency with respect to the SMRs is based on program-developed candidate coursework, assignments and candidate assessments that are evaluated by subject matter program faculty. The minimum standard set by programs must be a grade of “C” or better in each required subject matter program course.

### **How Other States Address Subject Matter Content for Teaching Credential Candidates**

Most states have a subject matter (content) requirement for teaching credential candidates. However, because most other states blend subject matter and teacher preparation in a single program, other states either use the [Praxis series of examinations](#) developed by Educational Testing Service, use [licensure assessments developed by Pearson](#), Inc, or develop their own content or content/content-pedagogy focused examinations. In other states, candidates typically take the subject matter/pedagogy examination late in the teacher preparation sequence, whereas in California teacher candidates must meet the subject matter competency requirement prior to beginning whole class instruction in student teaching or as an intern. The California State University goes one step further, requiring demonstration of subject matter prior to admission into a teacher preparation program.

## **Part 2: Reviewing the Subject Matter Competency Requirement**

The statutory framework described above that shapes teacher preparation and licensure is specific and detailed about the content knowledge and skills needed by teachers, which must be aligned with the knowledge expected of K-12 students, as applicable to the candidate's credential field. The theory of action that guides implementation of current statute posits the following: If future teachers are well-grounded in their content (as evidenced on an examination or in a Commission approved subject matter program that aligns with the K-12 content standards), then their pedagogical preparation in coursework and clinical practice will

allow them to connect that knowledge with effective instructional strategies to support student learning, as demonstrated through completion of an accredited teacher preparation program and passage of a Teaching Performance Assessment.

While the Commission's implementation of current law meets both statutory and testing-industry standards for validity, reliability and legal defensibility, options are limited for candidates to demonstrate subject matter competence through an examination or a program that is tightly coupled to the common set of SMRs adopted by the Commission. Stakeholders, credential candidates, program faculty and others in the policy community periodically ask why degrees in particular content areas are not recognized as meeting the subject matter requirement, whether combinations of coursework and examinations could be established to allow candidates hybrid options to demonstrate their competence and whether other options might also be allowable. Launching a review of the current subject matter competency requirement would allow the Commission to consider and evaluate the feasibility of other options or pathways, to meeting the subject matter competency requirement. All ideas identified will need to be examined for feasibility, consistency with current statute and appropriateness as part of a state licensure system. Questions that the Commission might consider to guide such a review include:

1. What does it mean to be subject matter competent to teach within the credential areas offered in California ([Appendix D](#))?
  - a. How do other states address this question?
  - b. How do other high-performing countries address this question?
  - c. What should California prioritize in terms of the required depth and breadth of subject matter content for prospective teachers?
2. What does it mean to align SMRs with K-12 content standards?
  - a. What degree(s) of alignment is necessary to ensure that candidates completing an examination or a subject matter program, or any other route that may potentially be developed, are adequately and appropriately prepared to teach the K-12 content standards?
  - b. How do the K-12 content standards relate to college graduation standards, and what are the implications for establishing alignment between these standards?
3. Does the Commission see a need to broaden candidate options for meeting the subject matter competency requirement?
  - a. What are the potential advantages and disadvantages of expanding candidate options for meeting the subject matter requirement?
  - b. What additional pathways would the Commission like to explore, i.e., college degrees or mixing and matching examinations and coursework?
  - c. How would the Commission ensure that all options are adequate to verify the subject matter competence of all prospective teachers and are appropriately aligned with the K-12 content standards?

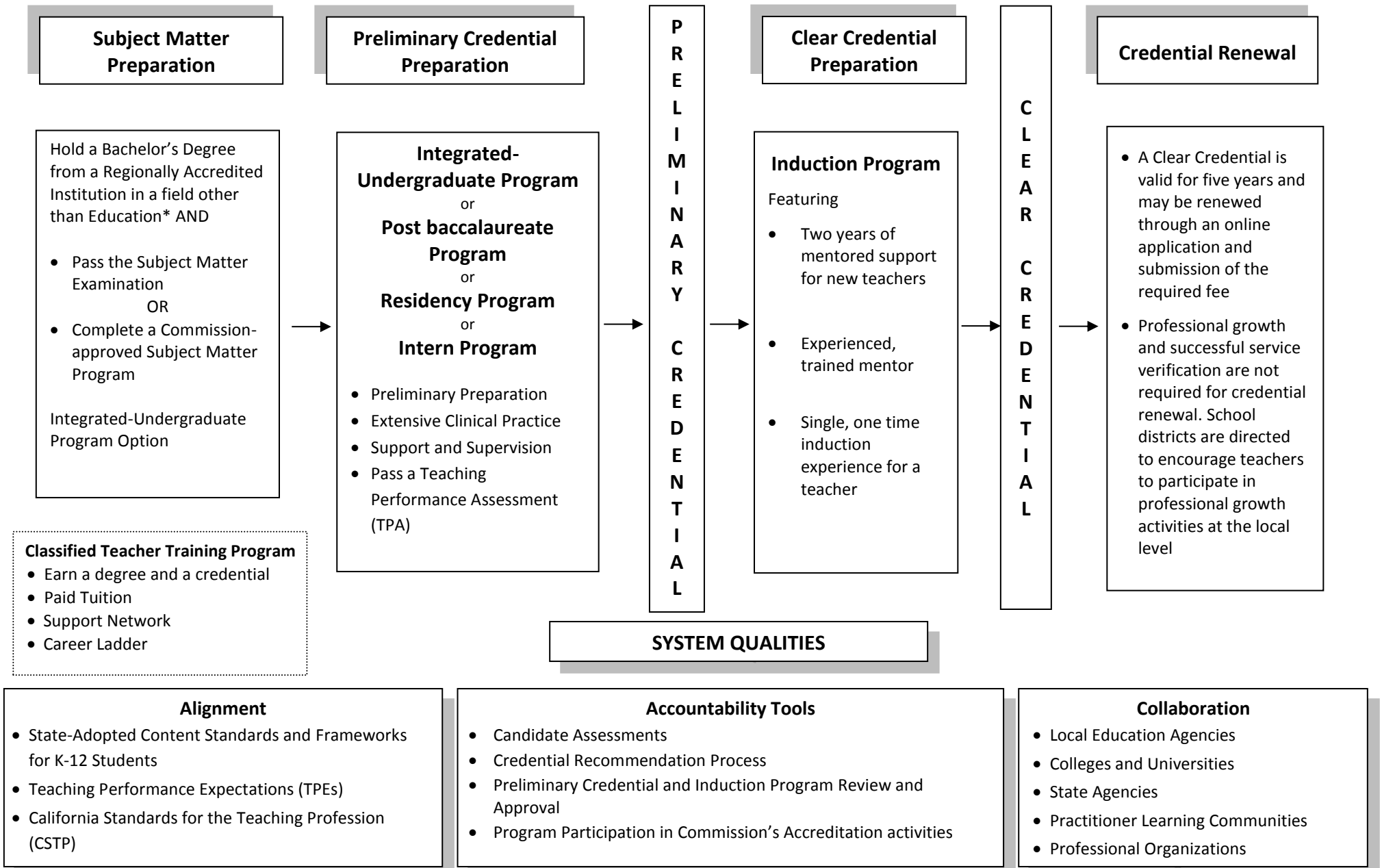
- d. How tightly coupled must recognized routes to subject matter competency be in order to meet the statutory requirement for consistency between these routes?

**Next Steps**

This agenda item presents information about the background of the subject matter competency requirement, how the subject matter requirement is currently addressed in the examination option as well as in the subject matter program option, and identifies questions for the Commission's consideration in potentially moving forward with a review of the Commission's subject matter competency requirement. Should the Commission indicate an interest in moving forward with this review, staff will develop a plan and timeline for this project.



# Appendix A: California's Learning to Teach System



### Appendix B: Volume for Subject Matter Examinations vs. Subject Matter Programs

Year	12-13		13-14		14-15		15-16		16-17		Total Percentage	
	Exam	PGM	Exam	PGM	Exam	PGM	Exam	PGM	Exam	PGM	Exam	PGM
<b>Multiple Subject</b>	4706	83	4592	34	4803	25	4748	55	5133	103	<b>99%</b>	1%
<b>Single Subject</b>												
1. English	858	259	760	259	760	256	816	237	793	269	<b>75.7%</b>	24.3%
2a. Foundational-Level Mathematics (FLM)	494	0	406	1	315	8	325	3	271	6	<b>99.0%</b>	1.0%
2b. Mathematics	366	284	236	282	205	273	205	258	213	268	47.3%	<b>52.7%</b>
3. Social Studies	859	174	756	167	713	155	754	189	756	179	<b>81.6%</b>	18.4%
4a. Foundational Level General Science (FLGS)	163	4	132	3	126	0	124	0	146	2	<b>98.7%</b>	1.3%
4b. Science <sup>1a</sup>	1037	64	934	43	791	34	760	25	770	40	<b>95.4%</b>	4.6%
5. Art	82	79	82	63	78	51	109	54	118	42	<b>61.9%</b>	38.1%
6. Music	80	121	65	95	85	136	69	118	73	136	38.0%	<b>62.0%</b>
7. Physical Education	204	228	132	223	191	184	209	178	207	184	48.6%	<b>51.4%</b>
8. World Languages <sup>1b</sup>	226	92	211	81	199	78	190	73	189	79	<b>71.6%</b>	28.4%
9. Agriculture	36	7	5	45	4	52	6	50	8	51	<b>88.6%</b>	11.4%
10. Business	12	8	5	4	6	3	5	2	5	5	<b>60.0%</b>	40.0%
11. Health Sciences	57	9	34	7	27	6	12	8	11	3	<b>81.0%</b>	19.0%
12. Home Economics	6	8	5	0	4	0	4	2	6	1	<b>69.4%</b>	30.6%
13. Industrial and Technology Education	7	3	1	3	9	0	6	1	7	0	<b>88.2%</b>	11.8%
14. World Language: English Language Development	0	0	0	0	0	0	1	0	0	0	<b>100.0%</b>	0.0%

<sup>1a</sup> Science: Biology, Chemistry, Geosciences, Physics

<sup>1b</sup> World Languages: American Sign Language, Arabic, Cantonese, Farsi, Filipino, French, German, Hindi, Italian, Japanese, Korean, Latin, Mandarin, Russian, Spanish, Vietnamese

### Appendix C: Commission Approved Subject Matter Preparation Programs (August 2018)

Commission Approved Subject Matter Programs																		
Institution	ESM	Eng	FLM	Math	HSS	FLGS	Bio	Chem	Geo	Phys	Art	Music	PE	WL	Ag	HSci	Total	
<b>CSU</b>	San Luis Obispo		X		X	X									X		<b>4</b>	
	Pomona		X		X	X	X	X	X	X		X	X	1	X		<b>12</b>	
	Bakersfield		X		X	X					X			1			<b>5</b>	
	Channel Islands	X	X	x	X												<b>4</b>	
	Chico	X	X		X	X	X	X	X	X	X	X		X	1	X		<b>13</b>
	Dominguez Hills	X	X		X	X		X	X					X	1			<b>9</b>
	East Bay			x	X	X								X				<b>5</b>
	Fresno	X	X		X	X		X	X	X	X	X		X	1	X		<b>13</b>
	Fullerton		X		X	X								X	3			<b>8</b>
	Long Beach	X	X		X	X						X		X	5		X	<b>13</b>
	Los Angeles	X	X	X	X	X		X	X	X	X	X		X	2			<b>14</b>
	Monterey Bay	X	X		X							X						<b>3</b>
	Northridge		X		X	X						X	X	X	1			<b>7</b>
	Sacramento	X	X		X	X		X	X	X	X	X	X	X				<b>10</b>
	San Bernardino		X		X							X		X	1			<b>5</b>
	San Marcos				X	X						X						<b>2</b>
	Stanislaus	X	X		X	X						X		X	1			<b>7</b>
	Humboldt		X		X	X						X	X	X	1			<b>7</b>
	San Diego		X	X	X		X	X	X	X	X		X	X				<b>10</b>
	San Francisco	X	X		X			X	X	X	X	X	X	X	1			<b>11</b>
San Jose	X	X		X	X						X	X	X				<b>7</b>	
Sonoma		X	X	X							X	X					<b>5</b>	
<b>UC</b>	Davis				X											X	<b>2</b>	
	Irvine				X												<b>1</b>	
	Los Angeles				X							X					<b>2</b>	
	San Diego				X		X										<b>2</b>	

Commission Approved Subject Matter Programs																	
Institution	ESM	Eng	FLM	Math	HSS	FLGS	Bio	Chem	Geo	Phys	Art	Music	PE	WL	Ag	HSci	Total
Santa Cruz				X													1
Azusa Pacific		X		X	X							X	X	1			6
Biola												X					1
California Baptist		X		X	X							X		1			5
California Lutheran				X	X								X				3
Concordia	X																1
Loyola Marymount		X		X	X	X	X	X			X			1			8
National		X		X													2
Otis Art and Design											X						1
Pepperdine		X															1
Pt. Loma Nazarene	X			X							X						3
St. Mary's		X															1
LaVerne						X	X	X	X	X			X				6
Redlands												X					1
San Diego				X													1
Pacific					X		X	X	X	X		X					6
Vanguard	X	X		X								X					4
William Jessup		X															1
<b>Totals</b>	<b>14</b>	<b>28</b>	<b>5</b>	<b>35</b>	<b>21</b>	<b>5</b>	<b>12</b>	<b>11</b>	<b>8</b>	<b>9</b>	<b>15</b>	<b>21</b>	<b>20</b>	<b>23</b>	<b>5</b>	<b>1</b>	<b>233</b>

There are currently NO Commission-approved Subject Matter Programs in Business, Home Economics, or Industrial and Technology Education

ESM = Elementary Subject Matter (Multiple Subject)  
 Eng = English  
 FLM = Foundational Level Mathematics  
 HSS = History Social Science  
 FLGS = Foundational-Level General Science

Geo = Geosciences  
 Phys = Physics  
 PE = Physical Education  
 HSci = Health Sciences  
 WL = World Languages: Spanish- 15; French-2; Latin-2; Italian-1; German-1;  
 Japanese-1; English language Development -1

## Appendix D: California's Credential Areas

### 44256

(b) "Multiple subject instruction" means the practice of assignment of teachers and students for multiple subject matter instruction, as is commonly practiced in California elementary schools and as is commonly practiced in early childhood education.

### 44257

(a) The commission shall issue single subject teaching credentials only in the following subjects:

- |                       |  |
|-----------------------|--|
| (1) Agriculture.      | (9) Industrial and Technology Education. |
| (2) Art.              | (10) Mathematics.                        |
| (3) Business.         | (11) Music.                              |
| (4) Dance.            | (12) Physical Education.                 |
| (5) English.          | (13) Science.                            |
| (6) Foreign Language. | (14) Social Science.                     |
| (7) Health Science.   | (15) Theatre.                            |
| (8) Home Economics.   |  |

(b) The commission shall issue the single subject teaching credential in foreign language with an authorization to teach Chinese, French, German, Russian, Spanish, or any other language that the commission determines is appropriate.

(c) Subjects that are commonly taught in departmentalized classes in California public schools shall be subsumed under the credential categories in subdivision (a).

### 44257.2

(a) In order to ensure excellence in teaching in specific subjects, the commission may issue a multiple or single subject teaching credential with a specified concentration in a particular subject based upon the depth of an applicant's preparation in an important subject of the school curriculum. The commission shall establish and maintain standards for concentrations in particular subjects, as necessary.

(b) The commission shall determine the authorizations of teaching credentials with concentrations. The commission shall ensure that with the exception of the single subject credential specified in subdivision (c) of this section, the authorization of a credential with a specified concentration shall not be more restrictive than the authorization of the same credential without the specified concentration.

(c) The commission shall issue the single subject teaching credential in science with a specified concentration in a particular subject. The commission shall establish and maintain standards for concentrations in science that shall consist of biological sciences, chemistry, geosciences, and physics. The holder of the single subject teaching credential in science shall be qualified and authorized to teach courses in general science, introductory science, integrated science, and coordinated science in kindergarten and grades 1 to 12, inclusive.