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# 6B

## Action

### *Professional Services Committee*

### **Program Approval and Initial Accreditation**

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**Executive Summary:** This agenda item presents three single subject matter programs for program approval.

**Recommended Action:** That the Commission approve the three single subject matter programs.

**Presenter:** Helen Hawley, Consultant,  
Professional Services Division

#### **Strategic Plan Goal: 1**

**Promote educational excellence through the preparation and certification of professional educators.**

- ◆ Sustain high quality standards for the preparation of professional educators.
- ◆ Sustain high quality standards for the performance of credential candidates.

April 2007

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## **Program Approval and Initial Accreditation**

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### **Introduction**

This agenda item presents three single subject matter programs submitted by institutions of higher education for single subject matter program approval.

### **Recommendation for Approval of Single Subject Matter Programs**

#### **Background**

The Commission regularly receives recommendations for program approval from single subject matter review panels. These panels of subject matter experts review all program documentation and make an informed determination as to whether the program meets the standards common to all subject matter programs and subject specific subject matter standards. The subject specific subject matter standards are closely aligned to the K-12 academic standards. These programs are usually undergraduate courses of study completed before candidates begin teacher preparation programs. However, in some cases they are completed concurrently with teacher education programs.

#### **Subject Matter Program Review Procedures**

Following are the general procedures for the review of subject matter programs:

1. Technical Assistance – After the Commission adopts a set of new program standards, Commission staff members provide technical assistance to prospective program sponsors wishing to submit responses to the new standards. Technical assistance materials are provided on the Commission’s website. Staff members train, assign, and coordinate review teams.
2. Preconditions Review – After the program proposal is received, Commission staff review the sponsor’s response to the preconditions. The preconditions are based on both state laws and Commission policies, and address minimum unit and content area requirements. If the preconditions response is incomplete, the sponsor is requested to provide specific information necessary for compliance with the preconditions.
3. Program Review –The program sponsor’s responses to the Commission’s subject matter program standards are reviewed by a team of two or more subject matter educators to determine if the program meets the program standards, including the subject matter requirements (SMRs). (The SMRs are the content knowledge required to be covered in the program and is aligned to the K-12 content standards that the candidate will be expected to know.) The Reviewers are trained in the alignment of the standards and subject matter requirements and the review process before they are assigned proposals to review. Reviewers are instructed to find explicit evidence that programs are not only aligned with K-12 content standards but introduce their candidates to those standards

within the context of their subject matter studies. The team must reach consensus that each standard is met based upon evidence provided in the document. If the program does not meet the standards, the sponsor is given an explanation of the findings. The sponsor may then submit the additional information requested. Once reviewers determine that the program proposal provides a convincing and adequate body of evidence to meet the Commission's adopted subject matter program standards, the program is recommended to the Commission for approval.

4. After subject matter program approval is granted by the Commission, the institution may accept candidates in the approved subject matter program. Graduates of a Commission-approved single subject matter preparation program meet the Commission's subject matter requirement and are not required to take the subject matter examination (CSET).

This report presents three single subject matter programs which have been deemed to have met all of the appropriate *Standards of Quality and Effectiveness for Single Subject Matter Preparation Programs* ([www.ctc.ca.gov/educator-prep/STDS-subject-matter.html](http://www.ctc.ca.gov/educator-prep/STDS-subject-matter.html)) by the appropriate review panel and are recommended to the Commission for approval.

### **Summary Information on the Single Subject Matter Programs**

#### **Azusa Pacific University: Mathematics**

The Single Subject Matter Preparation Program in Mathematics at Azusa Pacific University is based on preparing competent teachers of mathematics with a solid base of mathematical knowledge in a variety of areas and up to date knowledge of mathematical developments, including technology and techniques. Graduates of the program will be academically strong and able to express themselves effectively as teachers. Field experiences in the program support this goal as do such courses as MATH 480: Mathematics Reading, Writing and Presentation and MATH 450: Real Analysis. The program is designed to equip candidates to (a) solve quantitative problems and reason logically, (b) apply analytical approaches toward a range of cross-disciplinary problems, (c) demonstrate appropriate use of technology in mathematics, and (d) appreciate and describe the traditional foundations of mathematics and the role these foundations continue to play in society. Candidates are required to complete 52 semester units of mathematics courses in the program.

The student outcomes for the program are:

- Candidates will be able to use algebra theorems to solve a variety of problems and use real and complex number systems.
- Candidates will be able to use Euclidean and non-Euclidean geometry to solve problems and prove theorems, including properties and construction of three-dimensional objects.
- Candidates will be able to use mathematical induction to prove number theories, using the Euclidean algorithm, Fundamental Theorem of Arithmetic, and LCM and GCD concepts.
- Candidates will be able to use probability and statistics to solve problems, applying principles of permutations and combinations.
- Candidates will be able to use the functions of trigonometry and derivatives using the major theorems, including calculating the Taylor Series and Polynomials.
- Candidates will be able to connect the different mathematical fields through knowledge of mathematics history, including diverse contributions and cultural connections.

#### Loyola Marymount University: Science (Biology and Chemistry)

Loyola Marymount Science Candidates complete 44 semester units in general science, including geosciences, biology, chemistry and physics and 24 semester units in biology or chemistry for the concentration. The program's stated goal is to produce teachers who are confident in their ability to implement current science standards, to adapt to future changes, and who have the capacity to teach science as a process of inquiry and excite curiosity in their students. Each candidate is expected to:

- Understand science as a process and the methods of inquiry.
- Think logically and critically to evaluate new information.
- Have a strong grasp of specific science content.
- Integrate information from different fields of science.
- Synthesize information and communicate ideas to diverse groups of students.
- Know how to locate and use science resources in the community.

The scope and rigor of the required courses in the program insure that candidates will obtain the desired breadth and depth of knowledge needed to teach science in the public schools as defined by the K-12 Academic Content Standards. Laboratory and field experiences require candidates to approach problems scientifically and to integrate scientific concepts from different disciplines. The program underscores the importance of technology in learning and teaching science today.

#### San Francisco State University: Art

The underlying philosophy of the Subject Matter Program in Art is to provide prospective art teachers with the subject matter preparation needed to teach effectively consistent with current State requirements. The program, which includes rigorous coursework and practical field experience, emphasizes competency in studio art production in a variety of art disciplines, reflective practice in art criticism and aesthetic valuing, knowledge of art from many cultures, times and places, understanding of how the visual arts interconnect with other areas of inquiry and knowledge of theory and practice in the teaching of art. All studio courses teach the materials, techniques and practice of art domains taught in California K-12 classrooms. These specific disciplines are taught in the context of contemporary and historical cultural precedence and in a reflective, intellectually rigorous way as specified in the *Frameworks and Content Standards*.

The proposed Single Subject Matter Preparation Program in Art is a diversified studio-based art program, the core of which consists of 42 units of coursework: 21 units of studio art, 12 units of art history and 6 units of art education. Studio art and art history courses cover subjects commonly taught in California public schools: two-dimensional art (painting, drawing and printmaking), three-dimensional art (sculpture, ceramics and fiber arts), new media and media art (conceptual and information arts, photography) and art history. All of these courses address and engage in art criticism and aesthetic valuing. Art education courses cover the history, theory and practice of learning and teaching in art.

The program requires candidates to:

- Discuss art and ideas and write research and analysis papers using the vocabulary of art history, aesthetics and criticism.

- Understand and apply core concepts and practice in two dimensional art, three dimensional art, new genre arts and media arts.
- Develop advanced competency in perceiving and analyzing works of art through examining the elements of design that comprise a variety of art works.
- Develop visual literacy, which includes understanding of art in its many roles and in its many contexts.
- Understand the role of art in human development and the history and theories of learning in art.
- Develop advanced competency in techniques and materials, expanded knowledge of the forms and ideas in the discipline.

### **Recommendations**

#### Single Subject Matter Programs

Staff recommends approval of the following single subject matter programs at the following institutions:

Azusa Pacific University: Mathematics

Loyola Marymount University: Science (Biology and Chemistry)

San Francisco State University: Art

Based on the satisfactory review of responses to the appropriate *Standards of Quality and Effectiveness for Subject Matter Programs*, the sponsors meet the requirements for approval. Granting program approval to the program sponsors will allow the institutions to begin operation of the respective SB 2042 single subject matter programs.