

# School of Education

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## Richard Arum, Dean

3200 Education Building  
 General Information: 949-824-5118  
 Fax: 949-824-9103  
<http://education.uci.edu>  
[educadvising@uci.edu](mailto:educadvising@uci.edu)

## Overview

The School of Education is a unique interdisciplinary academic unit committed to promoting educational success in and out of school for ethnically and economically diverse learners from preschool through college through collective research, teaching, and service activities. The multidisciplinary faculty includes scholars in psychology, sociology, economics, linguistics, language and literacy, policy, race and ethnicity, and the achievement gap. Their research addresses core issues in contemporary education: (1) equity of opportunity for ethnically, linguistically, and economically diverse learners; (2) teaching and learning in science and math; (3) language and literacy development; (4) early childhood education and development; (5) out-of-school learning; and (6) effective interfaces between technology and education.

The School integrates the themes of Learning, Cognition, and Development; Educational Policy and Social Context; and Language, Literacy, and Technology across its programs, including the minor in Education, the B.A. in Education Sciences, the Ph.D. in Education, the Master of Arts in Teaching, and the Teacher Credential program. Scholarly work arises from the common belief that education environments, both in and out of school, are the sites of change in the quality of life and the availability of productive life choices for learners of all ages.

## Degrees

Education	M.A., Ph.D.
Education Sciences	B.A.
Elementary and Secondary Education	M.A.T.

## Honors

**Graduation with Honors.** Honors at graduation, e.g., *cum laude*, *magna cum laude*, *summa cum laude*, are awarded to approximately the top 16 percent of the graduating seniors. To be eligible for honors, a general criterion is that students must have completed at least 72 units in residence at the University of California. The student's cumulative record at the end of the final quarter is the basis for consideration for awarding Latin honors. Other important factors are considered visit at Honors Recognition (<http://catalogue.uci.edu/informationforadmittedstudents/academicadvisingandhonors/#honorsopportunities>).

## Bachelor of Arts in Education Sciences

The major in Education Sciences provides a foundation for the study of education, focused on four domains. These include (a) human development, learning, and cognition, (b) societal and policy contexts affecting education, (c) media and communication systems for learning, and (d) educational research and evaluation. Students in the major have the option of completing a specialization in: Early Childhood Learning and Development (p. 3); Children's Learning and Development (p. 4); Afterschool and Summer Learning and Development (p. 3); Digital Media and Learning (p. 5); English Language Learning (p. 5); and Educational Research and Evaluation (p. 6). With advanced planning, students in the major can complete a minor or second major in another discipline.

The B.A. in Education Sciences includes content from applied linguistics, cognitive science, developmental psychology, economics, informatics, media studies, policy analytics, social neuroscience, and sociology. Graduates are prepared for careers in the global knowledge economy, with opportunities to apply learning modalities and technologies in multicultural contexts. Graduates may choose from career opportunities in public education, informatics, higher education, and education software development. Many graduates will pursue advanced degrees leading to instructional credentialing or administrative leadership.

The B.A. in Education Sciences is not a professional degree. However, graduates are well prepared to pursue teacher training (see UC Irvine School of Education M.A.T. program). Students interested in teaching elementary grades will benefit from completing the major with a specialization in Early Childhood Learning and Development, or Children's Learning and Development. Students interested in teaching middle or high school are encouraged to meet with a Student Affairs Officer to combine the major with a minor or second major, aiming for proficiency in the subject they plan to teach. All students in the Education Sciences major are required to complete a minimum of 40 fieldwork hours in an educational setting.

## Admission

**Freshmen:** Preference will be given to those who rank the highest using the selection criteria as stated in the Undergraduate Admissions section (<http://catalogue.uci.edu/informationforprospectivestudents/undergraduateadmissions>) of the *Catalogue*.

**Transfer students:** Preference will be given to Junior-level applicants with the highest grades overall (minimum cumulative GPA of 3.0). It is suggested that prospective transfer students work toward completing coursework to fulfill the UCI general education requirements or IGETC.

**Change of Major.** Students who wish to change their major to Education Sciences should contact the Education Student Affairs Office for information about change-of-major requirements, procedures, and policies. Information is also available at the UCI Change of Major Criteria website (<http://www.changeofmajor.uci.edu>).

## Requirements for the B.A. in Education Sciences (Specializations also listed)

**All students must meet the University Requirements** (<http://catalogue.uci.edu/informationforadmittedstudents/requirementsforabachelorsdegree>).

**Grade Requirement.** A minimum grade average of at least C (2.0) is required (1) overall, (2) in all of the courses required for the major program, and (3) in the upper-division courses required for the major program. All courses for the major must be taken for a letter grade unless the grade option for the course is pass/no pass only.

### Overlap Restrictions

**Double Majors.** In fulfilling degree requirements for multiple majors, a maximum of two courses may overlap between two majors.

**Major and Minor Requirements.** Students may not receive both the major in Education Sciences and the minor in Educational Studies. In fulfilling requirements for a minor, a maximum of two courses may overlap between a major in Education Sciences and a minor from another department.

### Major Requirements

Students must complete twelve courses (48 units) and a practicum as specified below:

Lower-Division requirements (20 units total).

A. Five Lower-Division courses (20 units):

EDUC 10	Educational Research Design <sup>1</sup>
EDUC 15	Statistics for Education Research <sup>2</sup>
EDUC 30	21st Century Literacies
EDUC 40	Theories of Development and Learning Applied to Education
EDUC 50	Origins, Purposes, and Central Issues in K-12 Education

Upper-Division Requirements (28 units total).

B. Select one development course (4 units):

EDUC 106	Introduction to Early Childhood Education
EDUC 107	Child Development in Education
EDUC 108	Adolescent Development and Education
EDUC 185	Social Development in Education

C. Select one learning course (4 units):

EDUC 128	Exceptional Learners
EDUC 160	Foundations of Out-of-School Learning
EDUC 173	Cognition and Learning in Educational Settings
EDUC 176	Psychology of Learning, Abilities, and Intelligence

D. Select one educational policy and social context course (4 units):

EDUC 124	Multicultural Education in K-12 Schools
EDUC 126	Ethics and Education
EDUC 145	Theories and Pedagogies of Race in Education
EDUC 149	Family, School, and Community in Early Childhood
EDUC 150	Changing the High School Experience
EDUC 175	Foundations of Education

E. Select one communications and media course (4 units):

EDUC 104E	Multimedia and the Arts in the Multicultural Classroom
EDUC 125	Children, Schools, and Cinema
EDUC 130	Children's Learning and Media
EDUC 131	Educational Technology
EDUC 134	Teaching English Internationally
EDUC 151	Language and Literacy

F. Three additional elective Education courses (12 units). At least 8 units must be upper-division (numbered 100-199). <sup>3</sup>

The additional electives do not include the following professional education courses: EDUC 109, EDUC 143AW, EDUC 143BW, EDUC 148, EDUC 158. A maximum of 8 units for any repeatable Education course (e.g., EDUC 198, EDUC 199) may be used to satisfy this elective requirement.

**G. Practicum Requirement (40 hours total):**

A minimum of 40 hours of field experience or research in an education setting, satisfied in one or two ways.

1. Complete 40 hours of field experience or research completed in conjunction with one or more approved UCI courses that include a practicum. Consult the Education Student Affairs Office or School of Education website for Undergraduate Academic Programs for a current list of approved practicum courses.

or

2. Submit a petition to the Education Student Affairs Office for approval of verifiable hours from courses that are not on the approved practicum course list or hours from educational fieldwork that is not linked to a UCI course (e.g., tutoring experience, instructional experience in a summer program for children, etc.).

<sup>1</sup> The following course is an approved alternative for EDUC 10: SOCECOL 10

<sup>2</sup> The following statistics courses are approved alternatives for EDUC 15: SOCECOL 13, STATS 7, ANTHRO 10B, POL SCI 10B, PSYCH 10B, SOC SCI 10B, or SOCIOL 10B.

<sup>3</sup> 8 units of non-Education courses may be used to satisfy the major's elective requirement if the courses are also required for a student's selected specialization.

## Specializations

Six optional specializations are offered to students who are completing a B.A. in Education Sciences. Specializations usually include a blend of lower and upper-division courses that also satisfy requirements for the major. In most cases where students select only Education courses to fulfill specialization requirements, they will be able to satisfy requirements for the major and requirements for a specialization concurrently, without exceeding the twelve courses (48 units) needed for the major.

Students in the major may complete more than one specialization; however, a particular course may satisfy requirements for no more than two specializations, and no more than two courses may overlap between two specializations. Students in the major are limited to two specializations.

Except where noted otherwise in specialization requirements, students may petition to apply up to 4 units of EDUC 198 or EDUC 199 courses or up to 4 units for courses from other departments to meet any of the specialization requirements when they address the topic of the specialization.

### Specialization in Early Childhood Learning and Development

Select four courses (16 units) and a practicum as specified below:

**Lower-Division Requirements (4 units total)**

A. One lower-division course:

EDUC 40	Theories of Development and Learning Applied to Education
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**Upper-Division Requirements (12 units total)**

B. Three upper-division courses:

EDUC 106	Introduction to Early Childhood Education
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EDUC 107	Child Development in Education
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EDUC 149	Family, School, and Community in Early Childhood
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C. Practicum Requirement (40 hours total):

A minimum of 40 hours of field experience in an early childhood setting (pre-K) can be satisfied by taking EDUC 193 or otherwise completing verifiable fieldwork. The 40 hours of fieldwork for this specialization will concurrently satisfy the required 40-hour practicum for the major.

Students should consult the Education Student Affairs Office for information about courses that satisfy state requirements for Child Development Permits needed to teach in an early childhood setting.

### Specialization in Afterschool and Summer Learning and Development

Select six courses (24 units) and a practicum as specified below:

**Upper-Division Requirements (24 units total)**

A. One foundations course (4 units):

EDUC 160	Foundations of Out-of-School Learning
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B. Select one development and learning course (4 units) from:

EDUC 107	Child Development in Education
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EDUC 108	Adolescent Development and Education
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EDUC 124	Multicultural Education in K-12 Schools
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EDUC 128	Exceptional Learners
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## C. Select one course (4 units) from one of the following curricula themes:

Literacy	
EDUC 132	Reading and Writing Enrichment for After-School Programs
EDUC 138	Children's Literature in the Elementary Classroom
Math	
EDUC 122A- 122B- 122C	Foundations of Elementary School Mathematics I and Foundations of Elementary School Mathematics II and Foundations of Elementary School Mathematics III
Science	
EDUC 161	Discovering Science in Out-of-School Hours
Tutoring	
EDUC 100	Educational Strategies for Tutoring and Teacher Aiding

## D. Select one course (4 units) from one of the following curricula themes

Arts	
EDUC 104D	The Arts and Human Development
EDUC 137	Art in the Elementary School
Educational Technology	
EDUC 131	Educational Technology
Sports and Fitness	
EDUC 190	Principles and Practices of K–6 After School Sports and Fitness
Program Evaluation	
EDUC 157	Educational Research and Evaluation

## E. Select one additional course from a different curricula theme not previously used to satisfy requirement C or D (4 units).

## F. A capstone course (4 units):

EDUC 191	Advanced Fieldwork in After-School Education
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## G. Practicum Requirement (70 hours total):

A minimum of 70 hours of field experience in an out-of-school setting is satisfied by taking EDUC 160 (includes 20 hours of fieldwork at a site approved by the course instructor) and EDUC 191 (includes 50 hours of fieldwork at a site approved by the course instructor). The 70 hours of fieldwork for this specialization will concurrently satisfy the required 40-hour practicum for the major.

**Specialization in Children's Learning and Development**

Select six courses (24 units) and a practicum as specified below:

## Lower-Division Requirements (4 units total)

## A. One lower-division course:

EDUC 40	Theories of Development and Learning Applied to Education
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## Upper-Division Requirements (20 units total)

## B. Three upper-division courses:

EDUC 107	Child Development in Education
EDUC 124	Multicultural Education in K-12 Schools
EDUC 173	Cognition and Learning in Educational Settings

## C. Select two additional upper-division courses (8 units) from:

EDUC 122A	Foundations of Elementary School Mathematics I
EDUC 122B	Foundations of Elementary School Mathematics II
EDUC 122C	Foundations of Elementary School Mathematics III
EDUC 128	Exceptional Learners
EDUC 130	Children's Learning and Media
EDUC 132	Reading and Writing Enrichment for After-School Programs
EDUC 137	Art in the Elementary School
EDUC 138	Children's Literature in the Elementary Classroom
EDUC 151	Language and Literacy
EDUC 161	Discovering Science in Out-of-School Hours
EDUC 190	Principles and Practices of K–6 After School Sports and Fitness

## D. Practicum Requirement (40 hours total):

A minimum of 40 hours of field experience in a children's education setting (e.g., ages 5 through 12) can be satisfied in one of two ways. The 40 hours of fieldwork for this specialization will concurrently satisfy the required 40-hour practicum for the major.

1. Complete 40 hours of relevant field experience in conjunction with one or more approved UCI courses that include a practicum in a children's education setting. Consult the Education Student Affairs Office or School of Education website for Undergraduate Academic Programs for a current list of approved UCI courses.

or

2. Submit a petition to the Education Student Affairs Office for approval of verifiable hours from courses that are not on the approved practicum course list or hours from educational fieldwork that is not linked to a UCI course (e.g., tutoring experience, instructional experience in a summer program for children, etc.).

Students should consult the Education Student Affairs Office for information about several courses that offer an early start on requirements for the UCI post-baccalaureate Multiple Subject (elementary) Teaching Credential Program.

### Specialization in Digital Media and Learning

Select four courses (16 units) as specified below:

Lower-Division and Upper-Division Requirements (16 units total)

A. Select four courses (16 units) from:

EDUC 30	21st Century Literacies
EDUC 104E	Multimedia and the Arts in the Multicultural Classroom
EDUC 130	Children's Learning and Media
EDUC 131	Educational Technology
I&C SCI 3	Internet Technologies and their Social Impact
I&C SCI 4	Human Factors for the Web
I&C SCI 60	Computer Games and Society
I&C SCI 161	Game Engine Lab

A maximum of 8 units can be for I&C SCI courses.

### Specialization in English Language Learning

Select five courses (20 units) and a practicum as follows:

Lower-Division Requirements (4 units total)

A. One lower-division course (4 units):

EDUC 30	21st Century Literacies
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Upper-Division Requirements (8 units total)

B. Two upper-division courses (8 units):

EDUC 134	Teaching English Internationally
EDUC 151	Language and Literacy

Additional Lower-Division and Upper Division Elective Requirement (8 units total)

C. Select two additional courses (8 units) from:

EDUC 132	Reading and Writing Enrichment for After-School Programs
EDUC 138	Children's Literature in the Elementary Classroom
EDUC 151	Language and Literacy
EDUC 179W	Advanced Writing for Education Sciences
LINGUIS 3	Introduction to Linguistics
LINGUIS 10	Introduction to Phonology
LINGUIS 20	Introduction to Syntax
LINGUIS 51	Acquisition of Language
LINGUIS 68	Introduction to Language and Culture
LINGUIS 99	Special Topics in Linguistics
LINGUIS 111	Intermediate Phonology
LINGUIS 112	Advanced Phonology
LINGUIS 119	Special Topics in Phonetics/Phonology
LINGUIS 121	Intermediate Syntax
LINGUIS 155	Psychology of Language

A maximum of 8 units can be for Linguistics courses.

D. Practicum Requirement (40 hours total): A minimum of 40 hours of field experience in an English language learning setting can be satisfied in one of two ways. The 40 hours of fieldwork for this specialization will concurrently satisfy the required 40-hour practicum for the major.

A minimum of 40 hours of field experience in an English language learning setting can be satisfied in one of two ways. The 40 hours of fieldwork for this specialization will concurrently satisfy the required 40-hour practicum for the major.

1. Complete 40 hours of relevant field experience in conjunction with one or more approved UCI courses that include a practicum in an English language learning setting. Consult the Education Student Affairs Office or School of Education website for Undergraduate Academic Programs for a current list of approved UCI courses.

or

2. Submit a petition to the Education Student Affairs Office for approval of verifiable hours from courses that are not on the approved practicum course list or hours from educational fieldwork that is not linked to a UCI course (e.g., tutoring experience, instructional experience in a language learning context, etc.).

## Specialization in Research and Evaluation

Select five courses (20 units) as specified below:

Lower-Division Requirements (8 units total)

A. Two lower-division courses:

EDUC 10	Educational Research Design
EDUC 15	Statistics for Education Research <sup>1</sup>

Upper-Division Requirements (12 units total)

B. Select three upper-division courses from:

EDUC 156	Introduction to Field Methods in Education
EDUC 157	Educational Research and Evaluation
EDUC 159	Experimental Research Methods
EDUC 198	Directed Research in Education <sup>2</sup>
STATS 110	Statistical Methods for Data Analysis I

<sup>1</sup> The following statistics courses are approved alternatives for EDUC 15: SOCECOL 13 or STATS 7. The following course sequences are approved alternatives for EDUC 15 (both courses in the sequence must be completed): ANTHRO 10B; POL SCI 10B; PSYCH 10B; SOC SCI 10B; or SOCIOL 10B.

<sup>2</sup> A maximum of 4 units of EDUC 198 may be used to satisfy requirements for this specialization.

## Sample Program

### Freshman

Fall	Winter	Spring
EDUC 50	EDUC 40	EDUC 30
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective
		General Education/Elective

### Sophomore

Fall	Winter	Spring
EDUC 10	EDUC 15	Education Elective
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective

### Junior

Fall	Winter	Spring
Education U-D Learning Course	Education U-D Development Course	Education U-D Policy/Social Context Course
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective

### Senior

Fall	Winter	Spring
Education Elective	Education U-D Communications/Media Course	Education Elective
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective
General Education/Elective	General Education/Elective	General Education/Elective

## Undergraduate Minor in Education

The minor in Education is designed to facilitate exploration of a broad range of issues in the field of education. Graduates with the Education minor may be employed in schools, government, private industry, and non-profit organizations. Many graduates will pursue advanced training leading to teaching careers or administrative leadership.

### Requirements for the Minor in Education

The minor requires completion of a minimum of seven courses (four core courses and three electives) totaling 28 units. At least four courses must be upper-division. Students must also complete a minimum of 40 hours of verifiable field experience or research in an educational setting. No more than two non-Education courses (up to 8 units) from the student's major area of study may be used to satisfy the minor requirements. A maximum of 8 units may be used to satisfy minor requirements with any repeatable course.

A. Select four core courses (16 units) from the following:

EDUC 10	Educational Research Design <sup>1</sup>
EDUC 15	Statistics for Education Research
EDUC 30	21st Century Literacies <sup>1</sup>
EDUC 40	Theories of Development and Learning Applied to Education <sup>1</sup>
EDUC 50	Origins, Purposes, and Central Issues in K-12 Education
EDUC 107	Child Development in Education
EDUC 108	Adolescent Development and Education
EDUC 124	Multicultural Education in K-12 Schools
EDUC 160	Foundations of Out-of-School Learning
EDUC 173	Cognition and Learning in Educational Settings
EDUC 175	Foundations of Education
EDUC 176	Psychology of Learning, Abilities, and Intelligence

B. Select three elective courses (12 units) from the following:

1. Education courses numbered 1–199. A course selected to satisfy the minor core requirement cannot also be used to satisfy the elective requirement. A maximum of 4 elective units may be taken as research or independent study in EDUC 198.

C. Practicum. A minimum of 40 hours of field experience in an educational setting. Students may complete 40 hours of field experience from a list of approved practicum courses offered by the School of Education, which can include EDUC 198. Students may also petition to receive credit for practicum from other UCI courses.

<sup>1</sup> Course also satisfies university General Education requirements.

**Residence Requirement.** At least four upper-division courses must be successfully completed at UCI.

**GPA Requirement.** For certification in the minor, a student must obtain a minimum overall grade point average of at least C (2.0) in all courses required for the minor program. A maximum of 8 units of Pass/No Pass courses may be taken for the minor.

**Minor and Major.** Students may not receive both the minor in Education and the major in Education Sciences.

**Aspiring K-12 Educators.** The following courses satisfy core or elective requirements for the minor in Education and may satisfy some requirements for the UCI MAT/Credential program when the student earns a grade of B or better. Aspiring K-12 educators or students interested in a child development permit should consult a counselor in the Education Student Affairs Office about courses that are suited for the UCI MAT/Credential program:

EDUC 104D	The Arts and Human Development <sup>1</sup>
EDUC 107	Child Development in Education (combined with EDUC 124) <sup>1</sup>
EDUC 108	Adolescent Development and Education <sup>2</sup>
EDUC 124	Multicultural Education in K-12 Schools <sup>2</sup>
EDUC 128	Exceptional Learners
EDUC 131	Educational Technology <sup>2</sup>
EDUC 137	Art in the Elementary School <sup>1</sup>
EDUC 173	Cognition and Learning in Educational Settings
EDUC 176	Psychology of Learning, Abilities, and Intelligence
EDUC 190	Principles and Practices of K–6 After School Sports and Fitness <sup>1</sup>
POL SCI 21A	Introduction to American Government <sup>3</sup>

<sup>1</sup> May satisfy a requirement for aspiring multiple subject educators.

- <sup>2</sup> May satisfy a requirement for aspiring single subject educators.
- <sup>3</sup> Satisfies U.S. Constitution California Teaching Credential Requirement.

**Undergraduate Programs for Future Teachers Offered by Other Departments.** Undergraduates who are completing a minor in Education and who are considering a teaching career may also be interested in the following programs offered by other departments.

- School of Humanities: English Major with a Specialization in English for Future Teachers; History Major with a Specialization in History for Future Teachers; Spanish Major with an Emphasis in Spanish for Future Teachers
- School of Biological Sciences: Major in Biological Sciences with Concentration in Biological Sciences Education
- School of Physical Sciences: Chemistry Major with a Concentration in Chemistry Education; Math Major with a Specialization in Mathematics for Education; Physics Major with a Concentration in Physics Education.

Additionally, the School of Education, School of Physical Sciences, and School of Biological Science jointly sponsor an undergraduate teacher credential program for math and science majors.

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## Teaching and Service Credential Programs

The School of Education is authorized by the Commission on Teacher Credentialing to offer teacher and school administrator professional preparation programs for California teaching and service credentials. The School offers programs for multiple (p. ) and single (p. ) subject credentials. Also, in partnership with the School of Biological Sciences and the School of Physical Sciences, the School of Education offers the Cal Teach Science and Mathematics Program (p. ), an undergraduate Student Teacher Credential program for aspiring science or mathematics teachers. Additionally, in cooperation with UCI Division of Continuing Education, the School offers Administrative Services Credential (p. ) programs and a Reading Certificate program.

### Multiple Subject Teaching Credential

**The Multiple Subject Teacher Credential Program will not be accepting applications for the 2017-18, 2018-19 or 2019-20 academic years.**

Individuals interested in earning a multiple subject teaching credential are encouraged to apply to the UCI Master of Arts in Teaching/Credential Program (<http://catalogue.uci.edu/schoolofeducation/graduatedegreeprograms>).

### Single Subject Teaching Credential

**The Single Subject Teacher Credential Program will not be accepting applications for the 2017-18, 2018-19 or 2019-20 academic years.**

Individuals interested in earning a single subject teaching credential are encouraged to apply to the UCI Master of Arts in Teaching/Credential Program (<http://catalogue.uci.edu/schoolofeducation/graduatedegreeprograms>).

## Requirements for the Undergraduate Cal Teach Science and Mathematics Single Subject Credential Program

The following academic units offer undergraduates an option to earn a bachelor's degree in mathematics or a science discipline while concurrently satisfying requirements for a Single Subject Teaching Credential: Departments of Chemistry, Earth System Sciences, Mathematics, Physics and Astronomy, and the School of Biological Sciences. Interested students should consult degree program options described in this *Catalogue* or talk with a counselor in the School of Physical Sciences Student Affairs Office or the School of Biological Sciences Student Affairs Office. With careful, early planning, it is possible for students to complete their bachelor's degree and teacher certification in four years.

### Prior to Entry in the Cal Teach Single Subject Credential Program:

- Declare a major and, if applicable, a concentration in secondary education in one of the departments offering a Cal Teach Science and Mathematics credentialing option;
- Complete a Cal Teach Program enrollment form, indicating intent to complete requirements for the Single Subject Teaching Credential for mathematics or one of the science disciplines. This must be done by the end of an undergraduate's second year at the latest, and prior to enrolling in EDUC 55, which would typically be completed in fall of the third year. Enrollment forms are available in the School of Physical Sciences Student Affairs Office (134 Rowland Hall), the School of Biological Sciences Student Affairs Office (third floor, Biological Sciences III), and the Cal Teach Science and Mathematics Resource and Advising Center (137 Bison Modular).

### Prior to the Start of Student Teaching:

- Pass the California Basic Education Skills Test (CBEST);



- Pass the California Subject Exam for Teachers (CSET) or complete a subject-matter preparation program (available for Mathematics only);
- Hold a current Certificate of Clearance from the State of California;
- Hold a current TB test with negative results.

### Course and Fieldwork

Candidates who enroll in the undergraduate Cal Teach Single Subject Teacher Credential program at UCI are generally required to take the following courses.

PHY SCI 5/BIO SCI 14	California Teach 1: Introduction to Science and Mathematics Teaching
PHY SCI 105/BIO SCI 101	California Teach 2: Middle School Science and Mathematics Teaching <sup>1</sup>
CHEM/PHYSICS 193/BIO SCI 108	Research Methods
MATH 8	Explorations in Functions and Modeling (for Mathematics candidates only)
LPS 60	The Making of Modern Science
or MATH 184 & 184L	History of Mathematics and History of Mathematics Lesson Lab
EDUC 55	Knowing and Learning in Mathematics and Science <sup>1</sup>
EDUC 109	Reading and Writing in Secondary Mathematics and Science Classrooms <sup>1</sup>
EDUC 143AW	Classroom Interactions I
EDUC 143BW	Classroom Interactions II
EDUC 148	Complex Pedagogical Design <sup>1</sup>
EDUC 158	Student Teaching Mathematics and Science in Middle/High School <sup>1</sup>

<sup>1</sup> In order to be recommended for the Preliminary Single Subject Credential, a grade of C or better is required in the following Cal Teach teacher credential program courses: PHY SCI 105/BIO SCI 101; EDUC 55, EDUC 109, EDUC 143AW, EDUC 143BW, and EDUC 148. A grade of C or better is required for all sections of EDUC 158 (a repeatable course) that students complete, including all EDUC 158 sections with a student teaching requirement.

Student teaching for Single Subject candidates in the undergraduate Cal Teach program is defined as a minimum of four hours per day, five days per week for at least one full public school semester in an appropriate classroom setting in middle or high school.

Readiness for student teaching shall be determined by, but not be limited to, the candidate's academic work, professional conduct, and potential for success in teaching. Failure to be advanced to student teaching will be considered good cause for removal and/or a leave of absence from the program.

### Applying for a California Credential

In addition to fulfilling all of the above requirements, an applicant must:

- Show evidence of a college-level course, or pass an approved examination on the U.S. Constitution;
- Obtain a CPR certificate in Adult, Child, and Infant resuscitation training;
- Pass the Teacher Performance Assessment
- Official UCI transcript must show that bachelor's degree has been awarded.

If competence has been demonstrated by the conclusion of the student teaching program, and all other CTC and Departmental requirements are met, the undergraduate candidate is eligible for a preliminary credential through UCI.

**Supplementary and Additional Teaching Authorizations.** After acquiring a basic credential, it is possible to add further teaching authorizations. Consult an academic counselor in the School of Education for details.

### Administrative Services Credential

The School of Education sponsors a program through UCI Division of Continuing Education leading to the Administrative Services Credential. The Preliminary Administrative Services Credential is obtained by completing the approved program of 36 quarter units and a comprehensive examination. This credential also requires a valid basic credential, five years of full-time teaching or services experience, and passage of the CBEST.

The Professional Clear Administrative Services Credential begins when an administrative position is obtained. The UCI Professional Clear Administrative Services program requires the successful completion of two years of full-time school administrative experience, the Preliminary Administrative Services Credential, and six (6) quarter units (Induction and Final Evaluation, Education 398A-B) which provide structured mentoring, self-assessment, and formative/summative evaluation of the candidate. Those interested in these credentials should visit the UCI Division of Continuing Education website (<https://ce.uci.edu>) or call 949-824-5414.

## Faculty

Jonathan Alexander, Ph.D. Louisiana State University, *Campus Writing Coordinator and Professor of English; Culture and Theory; Education; Gender and Sexuality Studies; Informatics* (writing studies, sexuality studies, queer theory, new media studies)

Richard Arum, Ph.D. University of California, Berkeley, *Dean of the School of Education and Professor of Education; Criminology, Law and Society; Sociology*

Drew Bailey, Ph.D. University of Missouri, *Assistant Professor of Education*

Rachel Baker, Ph.D. Stanford University, *Assistant Professor of Education*

Bruce Baron, M.S. Pepperdine University, *Lecturer of Education*

Frank D. Bean, Ph.D. Duke University, *UCI Distinguished Professor of Sociology; Economics; Education* (international migration, demography, Mexican immigration, racial and ethnic relations, economic sociology, family)

Robert J. Beck, Ph.D. University of Chicago, *Senate Emeritus of Education*

Henry J. Becker, Ph.D. Johns Hopkins University, *Professor Emeritus of Education*

Liane R. Brouillette, Ph.D. University of Colorado Boulder, *Professor of Education* (educational policy, arts-based learning)

Elizabeth E. Cauffman, Ph.D. Temple University, *Professor of Psychology and Social Behavior; Criminology, Law and Society; Education; School of Law* (adolescent development, mental health, juvenile justice, legal and social policy)

Chuansheng Chen, Ph.D. University of Michigan, *UCI Chancellor's Professor of Psychology and Social Behavior; Education* (cross-cultural psychology, adolescent development, cognitive neuroscience, genes and behavior)

Penelope R. Collins, Ph.D. University of Toronto, *Associate Professor of Education*

Gilberto Q. Conchas, Ph.D. University of Michigan, *Professor of Education; Sociology* (urban education, sociology of education, comparative race and ethnicity)

AnneMarie M. Conley, Ph.D. University of Michigan, *Assistant Professor of Education*

Carol McDonald Connor, Ph.D. University of Michigan, *Chancellor's Professor of Education* (language and literacy development, including writing, learning disabilities and dyslexia, deaf and hard of hearing (DHH))

Kevin Dempsey, M.S. California State University, Fullerton, *Lecturer of Education*

Greg Duncan, Ph.D. University of Michigan, *UCI Distinguished Professor of Education; Economics; Psychology and Social Behavior* (economics of education, program evaluation, child development)

Jacquelynne S. Eccles, Ph.D. University of California, Los Angeles, *UCI Distinguished Professor of Education; Psychology and Social Behavior* (academic motivation and achievement, school and family influences on adolescent development, gender and ethnicity in STEM fields)

Dennis Evans, Ed.D. University of Southern California, *Non-Senate Academic Emeritus of Education*

George Farkas, Ph.D. Cornell University, *Professor of Education; Sociology* (social ethnic minority education, cognition, behavior)

Cynthia Feliciano, Ph.D. University of California, Los Angeles, *Associate Professor of Sociology; Chicano/Latino Studies; Education* (race/ethnicity/ minority relations, migration and immigration, education)

David John Frank, Ph.D. Stanford University, *Professor of Sociology; Education; Political Science* (globalization, sexuality, the natural environment, higher education)

Wendy A. Goldberg, Ph.D. University of Michigan, *Professor of Psychology and Social Behavior; Education* (developmental psychology, work and family, infant sleep, transition to parenthood, autism)

Shane Goodridge, Ph.D. University of Victoria, *Assistant Teaching Professor of Education*

Jody Guarino, Ed.D. Azusa Pacific University, *Lecturer and Supervisor of Teacher of Education*

Susan Guilfoyle, M.S. University of Southern California, *Lecturer of Education* (reading, language and literacy)

Gillian Hayes, Ph.D. Georgia Institute of Technology, *Robert A. and Barbara L. Kleist Professor of Informatics; Education* (interactive and collaborative technology, human-computer interaction, computer-supported cooperative work, educational technology, ubiquitous computing)

Marie-Charlotte Henderson, M.A. University of California, Irvine, *Lecturer of Education*

Alan R. Hoffer, Ph.D. University of Michigan, *Professor Emeritus of Education*

Jeffrey J. Hruby, M.A. California State University, Fullerton, *Lecturer of Education*

Bradley S. Hughes, Ph.D. University of California, Irvine, *Lecturer with Security of Employment of Ecology and Evolutionary Biology; Education*

Karajeane Hyde, M.A. Vanguard University, *Lecturer of Education* (mathematics education)

Constance Iloh, Ph.D. University of Southern California, *Assistant Professor of Education*

Mizuko Ito, Ph.D. Stanford University, *John D. and Catherine T. MacArthur Foundation Chair in Digital Media and Learning and Professor in Residence of Anthropology; Education; Informatics* (ethnography, game studies, youth culture, learning sciences, online communities)

Susanne M. Jaeggi, Ph.D. University of Bern, *Associate Professor of Education; Cognitive Sciences* (working memory, executive functions, cognitive training, lifespan development aging, individual differences)

Susan C. Jarratt, Ph.D. University of Texas at Austin, *Professor Emerita of Comparative Literature; Education* (histories and theories of rhetoric, ancient Greek rhetoric, writing studies)

Jade Marcus Jenkins, Ph.D. University of North Carolina at Chapel Hill, *Assistant Professor of Education*

Jeffrey M. Johnston, M.A. University of Southern California, *Lecturer of Education*

Hosun Kang, Ph.D. Michigan State University, *Assistant Professor of Education*

Young-Suk Kim, Ed.D. Harvard University, *Professor of Education*

Kimberly Lakes, Ph.D. University of Wisconsin-Madison, *Associate Professor in Residence of Pediatrics; Education*

Joshua F. Lawrence, Ed.D. Boston University, *Assistant Professor of Education*

Glenn S. Levine, Ph.D. University of Texas at Austin, *German Language Program Director and Professor of German; Education; Linguistics* (applied linguistics, foreign language pedagogy, German-Jewish culture and history, Yiddish language and culture, European culinary history)

Julia R. Lupton, Ph.D. Yale University, *Associate Dean for Research and Professor of English; Comparative Literature; Education; Religious Studies* (Renaissance literature, literature and psychology)

Virginia Mann, Ph.D. Massachusetts Institute of Technology, *Professor of Linguistics; Education* (reading ability: phoneme awareness, developmental dyslexia, phonological skills, early intervention, precocious readers; speech perception: context effects, cross-linguistic comparisons)

Jack R. McCullough, Ph.D. United States International University, *Lecturer with Security of Employment Emeritus of Education*

Carol Booth Olson, Ph.D. University of California, Los Angeles, *Professor of Education*

Emily K. Penner, Ph.D. University of California, Irvine, *Assistant Professor of Education*

Rita W. Peterson, Ph.D. University of California, Berkeley, *Senior Lecturer with Security of Employment Emerita of Education*

Stephanie Reich, Ph.D. Vanderbilt University, *Associate Professor of Education; Informatics; Psychology and Social Behavior* (child development, parenting, peer interactions, media, program evaluation)

Maria F. Rosales Rueda, Ph.D. University of Chicago, *Assistant Professor of Education; Economics*

Ruben G. Rumbaut, Ph.D. Brandeis University, *Distinguished Professor of Sociology; Chicano/Latino Studies; Criminology, Law and Society; Education* (international migration, immigration laws, criminalization, incarceration, social inequality and mobility, race and ethnicity)

Judith Haymore Sandholtz, Ph.D. Stanford University, *Professor of Education*

Rossella Santagata, Ph.D. University of California, Los Angeles, *Associate Professor of Education*

Robin C. Scarcella, Ph.D. University of Southern California, *Professor of Academic English/English as a Second Language; Education*

Sabrina E. Schuck, Ph.D. University of California, Riverside, *Health Sciences Assistant Clinical Professor of Pediatrics; Education; Psychology and Social Behavior* (ADHD, autistic spectrum disorders, disorders of reading and written language, human-animal intervention, non-pharmacological treatment of disruptive behavior, cognitive-behavioral school-based and family-based interventions)

Therese B. Shanahan, Ed.D. University of Southern California, *Lecturer of Education*

Sandra Simpkins, Ph.D. University of California, Riverside, *Associate Professor of Education* (organized after-school activities, motivation, family influences, diversity and equity, immigration and culture, STEM)

Jeanne M. Stone, M.A. California State University, Long Beach, *Lecturer of Education*

Timothy M. Tift, M.A. Pepperdine University, *Lecturer with Security of Employment Emeritus of Education*

Deborah Lowe Vandell, Ph.D. Boston University, *Professor of Education; Psychology and Social Behavior* (longitudinal studies of development, early childhood education, after-school programs, summer learning, child development, adolescent development)

Brad W. Vanpatten, M.A. California State University, Long Beach, *Lecturer of Education*

Mark J. Warschauer, Ph.D. University of Hawaii at Manoa, *Professor of Education; Informatics* (language, literacy, technology, STEM)

Di Xu, Ph.D. Columbia University, *Assistant Professor of Education*

Elizabeth van Es, Ph.D. Northwestern University, *Associate Professor of Education*

## Courses

### **EDUC 10. Educational Research Design. 4 Units.**

Designed to help students become intelligent consumers of research and independent researchers, and provides an introduction to the basic principles of educational research. Topics include research questions, literature reviews, and qualitative and quantitative research designs.

Overlaps with SOCECOL 10.

(III)

### **EDUC 15. Statistics for Education Research . 4 Units.**

Provides an introduction to the use of statistics in educational research. Focuses on testing and measurement, and provides basic tools to read, interpret, and draw conclusions from quantitative educational research.

Prerequisite: EDUC 10

Overlaps with SOCECOL 13.

(Va)

### **EDUC 25. Introduction to Education: Disciplinary Perspectives. 4 Units.**

Provides insights into educational organizations and processes by developing understanding of concepts used by four different disciplines (economics, history, psychology, and sociology) to analyze key issues and phenomenon in the field of education that profoundly influence individual life course outcomes.

(III)

### **EDUC 30. 21st Century Literacies. 4 Units.**

Provides an overview of literacies required for academic and career success in the 21st century. Issues addressed include reading, writing, academic language, research skills, media and technology skills, scientific literacy, critical thinking, communication, collaboration, and creativity.

(III)

### **EDUC 40. Theories of Development and Learning Applied to Education. 4 Units.**

Provides an introductory examination of central theories of human development and learning in their application to contemporary educational settings.

(III)

### **EDUC 50. Origins, Purposes, and Central Issues in K-12 Education. 4 Units.**

An introduction to the role of education in U.S. society and to central issues in K–12 education. Education is studied from four different perspectives: social, historical, philosophical, and political.

### **EDUC 52. Foundations of Bilingual Education and Bilingualism. 4 Units.**

Provides a comprehensive overview of current issues in bilingual education and bilingualism. Topics include dimensions of bilingualism, the effects of bilingualism on children's linguistic and cognitive development, bilingual education programs, literacy, special needs, and assessment.

Same as HUMAN 52, LINGUIS 51B.

**EDUC 55. Knowing and Learning in Mathematics and Science. 5 Units.**

Multidisciplinary study of knowing and learning in secondary school mathematics and science. Topics include standards for knowing, scientific epistemologies, mental representations, problem solving, expert-novice studies, assessment, and domain-specific thinking, learning, and teaching. Applied analysis of learning through clinical interviews.

Prerequisite: PHY SCI 5 or BIO SCI 14

(III)

**EDUC 100. Educational Strategies for Tutoring and Teacher Aiding. 4 Units.**

Placement in a public elementary or secondary school to gain experience as a tutor or teacher aide. Emphasis on cognitive learning and the development of instructional strategies and resources which can be used in effective cross-age and cross-cultural experiences.

Grading Option: Pass/no pass only.

Repeatability: May be taken for credit 3 times.

Same as ENGR 197A.

Restriction: Pass/not-pass option only

**EDUC 101. Strategies for Tutoring and Teacher Aiding in a Bilingual Classroom. 4 Units.**

Placement in a dual immersion school setting to gain experience as a bilingual (Spanish) tutor or teacher aide. Emphasis on cognitive learning and the development of instructional strategies and resources which can be used in effective cross-age and cross-cultural experiences.

Prerequisite: Must be able to communicate in Spanish.

Grading Option: Pass/no pass only.

**EDUC 104D. The Arts and Human Development. 4 Units.**

Students use various arts disciplines (e.g. studio art, music, dance, drama, and media arts) to investigate how visual and performing arts support individual human development. Introduction to pedagogy for integrating the arts in K-12 settings. Materials fee.

**EDUC 104E. Multimedia and the Arts in the Multicultural Classroom. 4 Units.**

Multiculturalism and under-represented U.S. minorities and the visual and performing arts: perspectives in artistic perception, creative expression, historical and cultural context, aesthetic valuing, and media literacy in the interpretation and production of multimedia arts products and applications for K-12 classrooms.

**EDUC 106. Introduction to Early Childhood Education. 4 Units.**

Designed to provide an introductory survey of the nature, needs, and education of young children. Explores questions such as "What should we teach young children?" and "How should we teach?".

**EDUC 107. Child Development in Education. 4 Units.**

Explores the pathways of normally developing children's growth and change over time. In particular, focuses on how cognitive and social development impact and are driven by educational contexts.

**EDUC 108. Adolescent Development and Education. 4 Units.**

Explores the physical, cognitive, emotional, and social development of adolescents, with an emphasis on the practical implications of developmental theory and research findings for teachers and other professionals who work with adolescents in middle or high school contexts.

**EDUC 109. Reading and Writing in Secondary Mathematics and Science Classrooms. 4 Units.**

Emphasis is placed on understanding the literacy processes (listening, speaking, viewing, thinking, reading, and writing) as they relate to middle and high school mathematics and science. Students integrate literacy-related strategies with curriculum-based goals supported in the California State Frameworks.

Corequisite: EDUC 158

**EDUC 122A. Foundations of Elementary School Mathematics I. 4 Units.**

Provides understanding of fundamental mathematics necessary to teach for conceptual understanding and higher-level reasoning and problem solving. Conceptual understanding of place value, fractions, proportionality, geometry, algebra, functions, probability, statistics, and measurement. Instructional applications of these concepts in grades K-8 teaching.

**EDUC 122B. Foundations of Elementary School Mathematics II. 4 Units.**

Provides understanding of fundamental mathematics necessary to teach for conceptual understanding and higher-level reasoning and problem solving. Conceptual understanding of place value, fractions, proportionality, geometry, algebra, functions, probability, statistics, and measurement. Instructional applications of these concepts in grades K-8 teaching.

Prerequisite: EDUC 122A

**EDUC 122C. Foundations of Elementary School Mathematics III. 4 Units.**

Provides understanding of fundamental mathematics necessary to teach for conceptual understanding and higher-level reasoning and problem solving. Conceptual understanding of place value, fractions, proportionality, geometry, algebra, functions, probability, statistics, and measurement. Instructional applications of these concepts in grades K-8 teaching.

Prerequisite: EDUC 122B

**EDUC 124. Multicultural Education in K-12 Schools. 4 Units.**

Provides a theoretical and empirical overview of educational issues affecting low-income immigrant and U.S. born minority student populations in an increasingly diverse and changing society.

Same as CHC/LAT 183.

**(VII)****EDUC 125. Children, Schools, and Cinema. 4 Units.**

Through popular films, analyzes aspects of school dynamics and interaction of schools with students, teachers, and public. Melding educational studies and film studies provides deeper understanding of methods used to transmit information and attitudes about schools to the lay public.

**EDUC 126. Ethics and Education. 4 Units.**

Ethics in education and how ethicists frame moral problems. Presents major ethical themes that affect education. Analysis of models for dealing with ethical goals and developing morality for K–12 students. Models for solving ethical dilemmas within an educational context.

Prerequisite: EDUC 50

**EDUC 127A. Moral Education for Youth Development I. 2 Units.**

The first of a two-course series that examines research-based theories for how school settings and adult mentors contribute to the moral development of adolescents. Students examine theory in the context of real-world application in four program observations.

Prerequisite: EDUC 126

**EDUC 127B. Moral Education for Youth Development II. 2 Units.**

Continuation of EDUC 127A. Allows students from 127A to experience the role of adults in the moral development of youth. Students receive training to deliver curriculum and apply research-based theories and methods in real-world youth settings.

Prerequisite: EDUC 126 and EDUC 127A

**EDUC 128. Exceptional Learners. 4 Units.**

An introductory survey of the nature, needs, and education of K–12 children with exceptionalities. Covers the categories and characteristics of exceptionalities, relevant state and federal legislation, and the role of general education teachers in special education.

**EDUC 130. Children's Learning and Media. 4 Units.**

Examines how popular media may impact how young people learn, develop, and communicate by looking at research related to the impacts of a wide range of popular media including television, video games, digital environments, mobile devices, and other multimedia.

**EDUC 131. Educational Technology. 4 Units.**

Presents an overview of the types and uses of educational technology to support and enhance the K–12 learning experience. Familiarizes students with lesson planning, instructional design, learning theory, and integrating technology into the curriculum.

**EDUC 132. Reading and Writing Enrichment for After-School Programs. 4 Units.**

Examines literacy development and the implementation of research-based practices to enrich learners' reading and writing skills in after-school programs. A minimum of 20 hours of after-school program fieldwork is required in order to design and implement literacy enrichment activities.

**EDUC 134. Teaching English Internationally. 4 Units.**

Covers methods of teaching English as a foreign language, basic language knowledge for English teachers, the social context of English language teaching around the world, and essential information about securing international employment as an English teacher.

**EDUC 137. Art in the Elementary School. 4 Units.**

Theory and practice in art education for the elementary school classroom. Includes content and pedagogy for future teachers and others interested in the relationship between child development and the production of visual art. Materials fee.

**EDUC 138. Children's Literature in the Elementary Classroom. 4 Units.**

Explores the wealth of children's literature that can be integrated into the elementary classroom. Surveys traditional literature, fiction, nonfiction, and poetry that make curriculum accessible to all students. Focuses on literary elements for both reading and creating text.

**EDUC 141A. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as LINGUIS 181A, PSYCH 141J.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

**EDUC 141B. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as LINGUIS 181B, PSYCH 141K.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

**EDUC 141C. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as LINGUIS 181C, PSYCH 141L.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

**EDUC 141D. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as LINGUIS 181D, PSYCH 141M.

**EDUC 141E. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as LINGUIS 181E, PSYCH 141N.

**EDUC 141F. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as LINGUIS 181F, PSYCH 141O.

**EDUC 141G. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as LINGUIS 181G, PSYCH 141P.

**EDUC 141H. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as LINGUIS 181H, PSYCH 141Q.

**EDUC 141I. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.**

An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as LINGUIS 181I, PSYCH 141R.

**EDUC 143AW. Classroom Interactions I. 4 Units.**

Focuses on research-based instructional strategies for enhancing the learning of secondary mathematics and science. Students learn about adolescent and second-language development to assist them in developing analyzing, teaching, and critiquing lessons for secondary classrooms.

Prerequisite: (PHY SCI 105 or BIO SCI 101) and EDUC 55. Satisfactory completion of the Lower-Division Writing requirement.

**(Ib)**

**EDUC 143BW. Classroom Interactions II. 4 Units.**

Focuses on equity and multicultural education research, special education, and research-based instructional and assessment strategies to assist students in designing, teaching, and assessing lessons that meet the needs of all secondary mathematics and science students.

Prerequisite: (PHY SCI 105 or BIO SCI 101) and EDUC 55 and EDUC 143AW and EDUC 148. Satisfactory completion of the Lower-Division Writing requirement.

**(IB AND VII).**

**EDUC 145. Theories and Pedagogies of Race in Education. 4 Units.**

Introduces theoretical frameworks to examine the role of race in American education. Emphasis is placed on introducing students to different race and ethnicity paradigms.

**EDUC 146. Education, Learning, and Culture. 4 Units.**

Exploration of learning and development through a cultural lens, drawing from a range of research traditions and disciplines to broaden understandings of theories that inform teaching and learning in formal and informal settings.

**EDUC 147. Poverty, Education, and Social Change. 4 Units.**

Explores how institutional and demographic changes in the U.S. have shaped disparities in education, the mechanisms through which poverty and social class influence families, and students, and promising programs and interventions to address inequity. Includes community service.

**EDUC 148. Complex Pedagogical Design. 6 Units.**

In this Cal Teach capstone course, students design lesson plans and complex instructional units, using approaches such as mathematics and science integration, problem-based instruction, project-based learning, technology, representations, scientific and mathematical analysis/modeling, authentic assessment, contextualization, and designing equitable learning environments.

Prerequisite: (PHY SCI 105 or BIO SCI 101) and EDUC 55 and EDUC 143AW

**EDUC 149. Family, School, and Community in Early Childhood. 4 Units.**

Focuses on the many socializing aspects of young children's social worlds. Through the use of ecological perspectives, explores the role of families, schools, and communities on children's social development, especially in early childhood.

**EDUC 150. Changing the High School Experience. 4 Units.**

Analysis of problems in high school education (e.g., student disengagement and underachievement of disadvantaged) and proposals for changing curriculum, instruction, and school organization. Students suggest own reforms and analyze effective/ineffective school practices.

Prerequisite: Recommended: 1 unit of EDUC 199.



**EDUC 151. Language and Literacy. 4 Units.**

Addresses the linguistic principles and processes that underlie oral and written language proficiency. Emphasis is on how to use phonology, morphology, orthography, semantics, syntax, and pragmatics to support literacy and oral language development for K-12 students.

Same as PSY BEH 192V.

Restriction: Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Education Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

**EDUC 152. Theory and Practice of Reading Interventions for Students At-Risk for Reading Failure. 4 Units.**

Examines the research concerning reading failure in young children and interventions used to support them. Topics include reading development and reading intervention. Students critically evaluate the relation between their fieldwork experience and the research and evaluation literature.

Repeatability: May be taken for credit 2 times.

**EDUC 156. Introduction to Field Methods in Education. 4 Units.**

Introduces students to methods for studying human behavior in context. It prepares students for conducting applied educational research, including designing needs assessments; conducting observations, interviews and focus groups; organizing and analyzing data; and synthesizing and presenting research findings.

Prerequisite: EDUC 10

**EDUC 157. Educational Research and Evaluation. 4 Units.**

Covers qualitative and quantitative research methods relevant for the evaluation of educational programs. Students will have the opportunity to plan, execute, and write-up a small evaluation project.

Prerequisite: EDUC 10 and EDUC 15

**EDUC 158. Student Teaching Mathematics and Science in Middle/High School. 6 Units.**

Student teaching includes orientation, seminars, preparation, and assumption of secondary school classroom instructional responsibilities in accordance with State credentialing requirements and in conjunction with the public school calendar. Five days/week and a minimum four hours/day over two quarters.

Corequisite: EDUC 109

Prerequisite: (PHY SCI 105 or BIO SCI 101) and EDUC 55 and EDUC 143AW and EDUC 143BW and EDUC 148

Repeatability: May be taken for credit 2 times.

**EDUC 158F. Advanced Fieldwork in Middle/High School Math and Science. 3 Units.**

Advanced fieldwork for math and science teacher credential candidates over two quarters, prior to starting a fall student teaching assignment. Requires a minimum of 40 hours per quarter of fieldwork in a K-12 classroom and attendance at weekly seminars.

Prerequisite: (PHY SCI 105 or BIO SCI 101) and EDUC 55 and EDUC 143AW and EDUC 143BW and EDUC 148

Repeatability: May be taken for credit for 6 units.

**EDUC 159. Experimental Research Methods. 4 Units.**

Designed to help students to develop the ability to think critically about research, and to develop an understanding of how to design and conduct experiments. The overall goal is to prepare students to independently plan and implement a research study.

Prerequisite: EDUC 10 and EDUC 15

**EDUC 160. Foundations of Out-of-School Learning. 4 Units.**

Provides an overview of child and adolescent learning through participation in out-of-school activities and settings. Recognizes the importance of matching out-of-school experiences with the interests, needs, and development level of students. Observation-based fieldwork included.

Repeatability: May be taken for credit 2 times.

Restriction: May be taken a second time if student is a candidate for Certificate in After-School Education, and the first time was prior to Fall 2008.

**EDUC 161. Discovering Science in Out-of-School Hours. 4 Units.**

Examines the design principles and teaching techniques that science museums and other out-of-school science programs use to motivate children and youth to learn science through discovery. Includes field experience at a science learning center or after-school program. Materials fee.

**EDUC 173. Cognition and Learning in Educational Settings. 4 Units.**

Foundational concepts in cognition and development as applied to student learning. Primary topics include historical behaviorism, basic cognitive structure and processes, complex cognition, cognitive development, and motivation.

Same as PSY BEH 192T.

Restriction: Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Education Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

**EDUC 175. Foundations of Education. 4 Units.**

Foundational questions of education are viewed from newly emerging developmental perspectives which treat cognition as embodied action and learning as cultural recapitulation. Historical, sociological, psychological, and philosophical implications of views toward aspects of teaching, learning, curriculum, and pedagogy are considered.

**EDUC 176. Psychology of Learning, Abilities, and Intelligence. 4 Units.**

Overview of classic positions on the mind, human abilities, and intelligence, especially as related to academic achievement. Contrasting views: psychometric versus information processing; experimental versus correlational research.

Prerequisite: PSYCH 7A or PSY BEH 9

Same as PSY BEH 192U.

Restriction: Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Education Majors have first consideration for enrollment.

**EDUC 179W. Advanced Writing for Education Sciences. 4 Units.**

Writing for multiple audiences and purposes about central concepts in education sciences, such as schools as organizations; social structures in education and stratification; individual decision making, government regulation and markets; human development and learning.

Prerequisite: Satisfactory completion of the Lower-Division Writing requirement.

Same as WRITING 179W.

Restriction: Upper-division students only.

**(Ib)****EDUC 180. Interdisciplinary Topics in Education. 4 Units.**

Analysis of issues in education from interdisciplinary perspectives. Topics covered vary with interests of instructor.

Repeatability: Unlimited as topics vary.

**EDUC 181A. Principles and Practices of Coaching Sports I. 4 Units.**

Focuses on foundational theories and instructional practices in coaching sports from fourth grade to the collegiate level. Prepares students for the coach's mandatory state certification examination for high school sports in California.

**EDUC 185. Social Development in Education. 4 Units.**

Examination of contextual, psychosocial, and biological factors contributing to the social development of children and adolescents. Theoretical perspectives, empirical findings, and methodological issues are emphasized. Implications of the scientific evidence for practical and policy decision-making surrounding development are discussed.

**EDUC 190. Principles and Practices of K–6 After School Sports and Fitness. 4 Units.**

Focuses on foundational theories and instructional practices in after-school sports and fitness for K–6 students. Includes a 20-hour field experience in an after-school setting.

**EDUC 191. Advanced Fieldwork in After-School Education. 4 Units.**

Capstone fieldwork experience for students seeking to earn the Department of Education-sponsored Certificate in After-School Education. Students are required to complete 50 or more hours of fieldwork and related assignments at an instructor-approved after-school program.

Prerequisite: EDUC 160

**EDUC 193. Directed Studies in Early Childhood Education. 2-4 Units.**

Advanced study of early childhood education under the direction of a faculty member, coupled with a community-based practicum.

Repeatability: May be repeated for credit unlimited times.

**EDUC 198. Directed Research in Education. 2-8 Units.**

Individually or in small groups, students are exposed to or participate in work related to a faculty member's research. Students also attend a weekly seminar and complete a research paper or comparable project.

Repeatability: May be taken for credit for 12 units.

Restriction: Sophomores only. Upper-division students only.

**EDUC 199. Individual Study. 1-4 Units.**

Intensified advanced study in areas in which a student has considerable background, under the direction of a faculty member who will guide and evaluate the study.

**EDUC 201. Teachers' Lives and Policy Environment of Teaching. 4 Units.**

Examines research and public perceptions about school-based educational processes, the influence of institutional structures and educational policy on the lives of teachers, and the challenges of school reform at the local and classroom level.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 202. Outcomes of Schooling/Student Assessment. 4 Units.**

Focuses on establishment of learning goals and assessment tools that are valid for all students, inform educational decisions, and promote educational success. Provides critical examination of different forms of assessment used in K–12 schools, including developmental assessments and appropriate interventions.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 203. Advanced Concepts in Learning and Cognition. 4 Units.**

Theories of cognition and their application to thinking and learning in school settings. Topics include memory, information processing, knowledge representation, problem solving, meta-cognition, and intelligence.

Prerequisite: EDUC 173

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 205. Critical Assessment of Teaching Practice and Learning. 4 Units.**

Student articulates a problem in instructional practice and uses research on cognition, assessment, and other tools to understand the problem. Capstone course emphasizes practices of teacher inquiry, reflection, and professional collaboration. Student's written analyses are evaluated as program's Comprehensive Examination.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 206. Design of Learning Environments for Teachers in Secondary School Subjects. 4 Units.**

Research on comprehension, conceptual understanding, reasoning, critical thinking, and problem solving with applications to pedagogy in secondary school subjects. Required for M.A.T. single subject students, unless substitution of Education 207 is authorized.

**EDUC 207. Cognition and Pedagogy in Quantitative Literacy. 4 Units.**

Reviews research on cognition in elementary mathematics, including numeracy, fractions, probability, proportionality, measurement, geometry, algebra. Emphasizes instructional approaches consistent with this research knowledge. Required for M.A.T. multiple subjects students, unless substitution of Education 206 is authorized by the Department.

**EDUC 208. Reading Development . 4 Units.**

Course will focus on the language and literacy development of typically-developing native English-speaking students in the U.S. Students will learn about seminal and recent research in the field of reading development.

Restriction: Graduate students only.

**EDUC 210. Language, Literacy, and Discourse. 4 Units.**

Introduces students to the interdisciplinary study of language, literacy, and discourse across historical and educational contexts. Addresses theories of how people learn, interact, and make meaning through a variety of semiotic resources, including oral communication, print, and digital media.

Restriction: Graduate students only.

**EDUC 211. Writing Theory and Practice. 4 Units.**

Offers an overview of histories, theories, and research in the field of composition studies from 1950 to the present. Addresses the influences of theory and research on teaching practice at K–12 and college levels.

Restriction: Graduate students only.

**EDUC 212. Literacy and Technology. 4 Units.**

Examines theoretical, historical, and contemporary relationships of technology and literacy. Topics include online communication, multimodality, video games, the use of technology for literacy instruction in schools, and research approaches for investigating literacy development with technology.

Restriction: Graduate students only.

**EDUC 218. Special Topics in Teaching and Learning. 4 Units.**

Advanced seminar designed to engage students in highly interactive examination of current issues in teaching and learning. Topics and content vary by quarter, depending upon research interests of the faculty and students.

Repeatability: May be taken for credit 10 times as topics vary.

Restriction: Graduate students only.

**EDUC 220. Developing Adolescent Literacy. 4 Units.**

Examines how adolescents leverage vocabulary knowledge, word-reading skills, background understanding, and knowledge of content-specific text features to master an increasing range of texts both independently and for subject-area learning.

Restriction: Graduate students only.

**EDUC 222. Research Epistemologies and Methodologies. 4 Units.**

Introduction to epistemological underpinnings of educational research and to a range of research methodologies in education. Includes examination of quantitative and qualitative studies through reading and analyzing contemporary research. Critique of selected research studies pertinent to educational practice and policy.

Restriction: Ed.D. Program students only.

**EDUC 225. Learning, Development, and Culture. 4 Units.**

Explores issues of learning and development through a cultural lens. The interplay between culture and learning and culture and development is analyzed through the discussion of relevant readings from both psychological and anthropological research traditions.

Restriction: Graduate students only.

**EDUC 229. Theories of Human Development. 4 Units.**

Examines developmental theory as a guide for research and practice in education. The evolution of classical development theories and the emergence of new theoretical models are considered. Theoretical perspectives include ecological systems, life course, psychobiology, attachment, and social-cognitive theories.

Restriction: Graduate students only.

**EDUC 230. The History and Culture of Schooling in the United States. 4 Units.**

Considers the historical, cultural, and structural processes that contextualize American schooling. In particular, examines the roles of race, class, and gender in the context of public education in the United States.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 235. Psychology of Reading Acquisition. 4 Units.**

Surveys theory and empirical evidence concerning acquisition, cognitive processes, and consequences of skilled reading. Explores psychological models of skilled reading, how children acquire reading and writing skills in their home and second languages, cognitive consequences of acquiring literacy skills.

Restriction: Graduate students only.

**EDUC 238. Special Topics in Human Development. 4 Units.**

An advanced seminar designed to engage students in highly interactive examination of current issues in human development. Topics and content vary by quarter, depending upon the research interests of the faculty and students.

Repeatability: May be taken for credit 10 times as topics vary.

Restriction: Graduate students only.

**EDUC 240. Instructional Design and Education Technology. 4 Units.**

Design of high-quality instructional units consistent with current theory and research in cognitive psychology and constructivist-compatible instructional practice and infused with appropriate uses of computer and video technologies. Students design a complete instructional unit using these principles.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 241. Children's Sense Making in Science. 2 Units.**

Investigates elementary students as individuals who construct understanding of concepts through their interactions with others and the world around them. Observations of children in informal settings to analyze learning in context.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 243. The Policy Environment of Teaching. 2 Units.**

Examines research and public perceptions about school-based educational processes, the influence of institutional structures and educational policy on the lives of teachers, and the challenges of school reform at the local and classroom levels.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 245. Learning Inside and Outside of School. 2 Units.**

A field-based course focused on observing adolescents in out-of-school contexts to examine adolescent learning and development in a range of contexts, how out-of-school contexts motivate learning and development, and consider the implications for teaching.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 246. Teaching Investigations: Identifying Dilemmas of Practice. 4 Units.**

Focuses on identifying problems of teaching practice that arise in student teaching, examining the theoretical foundations that underlie problems of practice, and developing approaches for inquiring into strategies to systematically address instructional challenges.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 247. Teaching Investigations: Exploring Dilemmas of Practice. 4 Units.**

Focuses on exploring problems of teaching practice that arise in student teaching, drawing on research to examine the theoretical foundations that underlie problems of practice, and to propose courses of action to address and study educational interventions.

Prerequisite: EDUC 246

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 248. Understanding Teacher Agency. 4 Units.**

Considers how teachers can become agents of change within their school contexts, through their participation in professional organizations and via social media. Candidates experiment with using different avenues for sharing images of practice and action research.

Prerequisite: EDUC 246

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 251. Educational Policy and Politics. 4 Units.**

An in-depth study of topics relevant to educational reform and policy-making. Topics include: the policy-making process, the role of values and interest groups, policy analysis, equality of educational opportunity, systemic reform, implementation, and politics at the school site.

Restriction: Graduate students only.

**EDUC 254. College Access and Persistence. 4 Units.**

Introduction to how social, political, and economic forces impact college access and persistence in the U.S. higher education system. Investigates historical perspectives and theoretical underpinnings of college access and retention research and the link between K-12 schooling and postsecondary stratification.

Restriction: Graduate students only.

**EDUC 255. Immigration and the New Second Generation. 4 Units.**

Focuses on Asian, Latino, and Black children of immigrants. Investigates how today's second generation adapts, incorporates into the U.S. social structure, transforms the social and economic landscape. Explores assimilation, immigrant families/communities, language, racial/ethnic identities, gender, education, changing U.S. racial structure.

Restriction: Graduate students only.

**EDUC 258. Special Topics in Educational Policy and Social Context. 4 Units.**

An advanced seminar designed to engage students in highly interactive examination of current issues in educational policy and social context. Topics and content will vary by quarter, depending upon the research interests of the faculty and students.

Repeatability: May be taken for credit 10 times.

Restriction: Graduate students only.

**EDUC 259. Community Research and Action. 4 Units.**

Introduces the theoretical underpinnings and research approaches of the field of Community Psychology. Project-based course focused on research and action in communities, organizations, and other extra-individual units (e.g., schools).

Restriction: Graduate students only.

**EDUC 261. Social and Cultural Foundations of Education. 4 Units.**

Provides a critical understanding of the social and cultural foundations of education through reproduction theory. Explores the unique ways in which culture and power intersect within schools and schooling systems to reproduce and resist educational inequality.

Restriction: Graduate students only.

**EDUC 264. Economic Foundations of Education and Social Policy. 4 Units.**

Beginning/intermediate microeconomics course provides students with an introduction to how economists think about household decision-making, markets, benefit-cost analysis, social policy issues in general and education policy in particular.

Restriction: Graduate students only.

**EDUC 265. Applied Regression Analysis for Education and Social Research. 4 Units.**

Provides students with a working knowledge of multiple regression and the statistical analysis of longitudinal data. Topics include a review of the OLS regression model, event-history methods, and various other techniques for analyzing longitudinal data.

Prerequisite: EDUC 288B

Restriction: Graduate students only.

**EDUC 267. Classroom Research Methods. 4 Units.**

Uses students' research problems as the basis for exploring methods—teacher and student observation, interview, case studies, think alouds. Intended for doctoral students with a specific research question and very good grounding in the literature related to their question.

Restriction: Graduate students only.

**EDUC 274. Studies of Professional and Staff Development. 2-4 Units.**

Research and theory of effective strategies for professional and staff development. Topics include: adult learning as related to professional growth of teachers, staff development as vehicle for systemic reform, reforms to enhance teacher professionalization and empowerment.

Restriction: Doctoral students only.

**EDUC 278. Experimental Designs in Educational Research. 4 Units.**

Designed to enable students to think critically about experimental research, and to develop an understanding of how to design and conduct experiments. The overall goal is to prepare students to independently plan and implement an experimental research study.

Prerequisite: EDUC 222

Restriction: Graduate students only.

**EDUC 280. Research Methods. 2-8 Units.**

Provides practitioners at advanced degree level with insight and leadership skills for working with increasingly diverse school populations. Content varies with interest of students and instructors. May focus on populations or broader content area such as education reform in California.

Repeatability: May be taken for credit 3 times.

Restriction: Doctoral Degree candidates only.

**EDUC 282. Graduate Seminar in the History of the Philosophy of Education. 4 Units.**

Draws upon results in the historical development of the philosophy of education from Plato, Quintillian, Augustine, Locke, Rousseau, to more contemporary thinkers such as Dewey, Freire, Egan, and Rorty.

Repeatability: May be repeated for credit unlimited times.

**EDUC 283A. Qualitative Research Methods in Education I. 4 Units.**

Introduces students to qualitative research methodologies and methods and explores strengths and challenges of this research tradition. Topics include logistical and ethical issues, reliability, validity and generalizability, and the role of reflexivity. Students will also engage in fieldwork.

Prerequisite: EDUC 222

Restriction: Graduate students only.

**EDUC 283B. Qualitative Research Methods in Education II. 4 Units.**

Provides methods for conducting and analyzing qualitative research in educational settings. Topics include data collection, coding, representing qualitative data, and using software for qualitative data analysis.

Prerequisite: EDUC 283A

Restriction: Graduate students only.

**EDUC 285. Theories of Learning Cognition. 4 Units.**

Overview of theories applicable to learning in schools and extracurricular contexts. Cognitive, psychometric, behavioral, and neuroscience perspectives are applied to such topics as memory, knowledge structures, problem solving, motivation, self-referent beliefs, expertise, assessment, and cognitive abilities, including intelligence.

Restriction: Graduate students only.

**EDUC 287. Quantitative Data Analysis in Education Research and Evaluation. 4 Units.**

Covers statistical aspects of survey-based evaluations and quantitative research in education. Includes sampling, coding open-ended information, data management, scale construction, statistical analysis, and presentation of findings. Students analyze data sets—a district-based evaluation and a national survey—using SPSS.

Prerequisite: EDUC 281

**EDUC 288A. Educational, Social, and Behavioral Statistics. 4 Units.**

Designed for graduate students with previous course work in statistics, including experience with statistical software such as SPSS. The emphasis is on regression analysis and the general linear model. Students learn to analyze real data using Stata software.

Prerequisite: Prior coursework in statistics, and experience with statistical software such as SPSS.

Restriction: Graduate students only.

**EDUC 288B. Structural Equation Modeling for Educ, Soc & Behavioral Analysis. 4 Units.**

Rigorous introduction to structural equation modeling for students with strong prior course work in statistics. Topics include path diagrams, SEM with observed variables, factor analysis, SEM with latent variables. Maximum likelihood estimating, goodness-of-fit measures, nested models, related topics.

Prerequisite: EDUC 288A

Restriction: Graduate students only.

**EDUC 289. Use of Video in Educational Research. 4 Units.**

Provides students with conceptual and methodological tools for using video in educational research. Students work with their own video data or with publicly accessible databases.

Restriction: Graduate students only.

**EDUC 295. Pre-Dissertation Research. 1-12 Units.**

Independent study course taken under the direction of a faculty member who guides the student's research. May include guidance on data collection, methodology, human subjects protocol, conference presentation, scholarly publication, program benchmark activities.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

**EDUC 296A. Professional Writing in Educational Research I. 2 Units.**

First of a two-course series designed to extend students' knowledge of conducting and publishing educational research. Topics include the logic of research and how to effectively communicate research findings, with particular emphasis on proficient scientific writing.

**EDUC 296B. Professional Writing in Educational Research II. 2 Units.**

Second of a two-course series designed to extend students' knowledge of conducting and publishing educational research. Topics include the logic of research and how to effectively communicate research findings, with particular emphasis on proficient scientific writing.

**EDUC 298. Independent Study. 1-8 Units.**

Independent research on topics related to education.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

**EDUC 299. Dissertation Research. 1-12 Units.**

Specifically designed for students researching and writing their dissertations.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

Restriction: Doctoral students only.

**EDUC 301. Directed Elementary Field Experiences in Diverse Schools. 2 Units.**

Fieldwork experiences and seminars to provide introduction to the California Teaching Performance Expectations, including guidelines for professional expectations, observation and participation in classrooms, instructional planning, classroom management, and formative experiences and preparation for the state-mandated Teaching Performance Assessment.

Grading Option: Satisfactory/unsatisfactory only.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 302. Directed Secondary Field Experiences. 2 Units.**

Field work experiences and seminars to provide introduction to the California Teaching Performance Expectations, including guidelines for professional expectations, observation and participation in classrooms, instructional planning, classroom management, and formative experiences and preparation for the State-mandated Teaching Performance Assessment.

Restriction: Master of Arts Degree students only.

**EDUC 304. Student Teaching in the Elementary Schools. 4-12 Units.**

Student teaching seminars prepare candidates for assumption of classroom instructional responsibilities in accordance with State credentialing requirements. Four full days a week of student teaching in public school elementary classrooms in winter quarter and five full days in spring quarter.

Repeatability: May be taken for credit 2 times.

Restriction: Master of Arts Degree students only.

**EDUC 305. Learning to Learn from Teaching in Secondary Schools. 4 Units.**

Analytic tools for (1) observing and reflecting on observed instruction; (2) examining student thinking and the relationship between teaching and learning; (3) understanding particular components of the teaching/learning process; and (4) planning effective instruction including innovative teaching practices.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 306. Supervised Teaching in Bilingual Education, Elementary. 4-12 Units.**

Student teaching experiences in bilingual public school classrooms to include orientation, regular seminars, and preparation for bilingual classroom instructional responsibilities in accordance with State credentialing requirements and in conjunction with the public school calendar.

Repeatability: May be repeated for credit unlimited times.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 307. Student Teaching in Intermediate/Secondary School. 2-16 Units.**

Student teaching includes orientation, seminars, and preparation for and assumption of secondary school classroom instructional responsibilities in accordance with State credentialing requirements and in conjunction with public school calendar. Five full days a week in both winter and spring quarters.

Repeatability: May be taken for credit for 20 units.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 308. Performance Assessment for California Teachers, Multiple Subjects. 1 Unit.**

Preparation and technical support for multiple subjects teacher candidates to complete State-required Teaching Performance Assessment for the California preliminary credential. Includes assistance in planning, teaching/videotaping, assessment and reflection, and document production.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be taken for credit 2 times.

Restriction: Graduate students only. Education Majors only.



**EDUC 310. Performance Assessment for California Teachers. 1 Unit.**

Preparation and technical support for teacher candidates to complete the required Teaching Performance Assessment for California credential licensure. Structured support for planning, videotaping, and document production occurs in meetings scheduled to coincide with the timeline for the project.

Repeatability: May be taken for credit 2 times.

Restriction: Graduate students only. Education Majors only.

**EDUC 320. Teaching Physical and Health Education in Elementary School. 4 Units.**

Methods of teaching physical education for the elementary classroom teacher. Through an interactive environment, students experience the California Physical Education and Health content standards with appropriate pedagogy. Concepts address motor skills, physical fitness, and personal responsibility for lifelong health.

Grading Option: Satisfactory/unsatisfactory only.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 322A. Curriculum and Methods for Elementary School Mathematics I. 4 Units.**

Scope, sequence, and methods of teaching mathematics at all levels of elementary school. Presented through lectures, discussions, demonstrations, and exploration of a variety of materials. Covers how to plan lessons, motivate students, diagnose difficulties, and evaluate learning in mathematics.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 322B. Curriculum and Methods for Elementary School Mathematics II. 4 Units.**

Part two of a course addressing pedagogical methods for elementary mathematics. Lectures, discussions, and exploration of instructional strategies and materials support preservice teacher development in the critical areas of planning, instruction, and assessment for conceptual understanding in mathematics.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 323. Curriculum and Methods for Elementary School Science. 4 Units.**

Prospective elementary teachers learn how to teach science in grades K-8. Covers States science requirements, a variety of teaching methods, criteria for selecting science curriculum materials, and how to plan science lessons, units, experiments, projects, and demonstrations.

Same as ECO EVO 323.

**EDUC 323A. Curriculum Methods in Elementary Science. 2 Units.**

Prospective elementary teachers learn how to teach science in grades K-8. Covers state science requirements, a variety of teaching methods, and criteria for selecting science curriculum materials.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 323B. Curriculum Methods in Elementary Science. 2 Units.**

Prospective elementary teachers learn how to teach science in grades K-8. Covers state science requirements, a variety of teaching methods, criteria for selecting science curriculum materials, and how to plan science lessons, units, experiments, projects, and demonstrations.

Prerequisite: EDUC 323A

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 324. Curriculum and Methods for Elementary School Language Arts Integrated with Social Studies. 4 Units.**

An integrated approach to language arts and social studies instruction at the K–6 level based on California State English/Language Arts and Social Studies Frameworks and Standards. Focus on teaching content through literature and writing and providing access for all learners.

Restriction: Graduate students only. Education Majors only.

**EDUC 325. Teaching the Visual and Performing Arts in Elementary School. 2 Units.**

Introduction to the issues and practices — including student diversity, academic literacy, and interdisciplinary content — involved in integrating the California visual and performing arts curriculum framework and academic content standards with developmentally appropriate teaching strategies for the elementary classroom. Materials fee.

Repeatability: May be taken for credit 2 times.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 326. Curriculum and Methods for Elementary School Reading. 4 Units.**

Teaching an integrated reading/language arts program in the elementary classroom. Implementing theories, principles, and methods which are research and reality-based. Creating a child-centered, language-rich program to meet needs of children in multicultural/multilingual settings.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 329. Theories and Methods of English Language Development Applied to Elementary Students. 4 Units.**

Theories and methods of English language development and instruction of English language learners, with focus on elementary students. Includes language acquisition theory, language and content, assessment strategies, and preparation of curricula and instruction for grades K–6 English language learners.

Restriction: Graduate students only. Education Majors only.

**EDUC 333. Health Principles and Practices for the Elementary Teacher. 1 Unit.**

Methods for creating healthy environments for student learning in elementary schools. Introduction of California content standards and frameworks with appropriate pedagogy. Personal, family, school, community factors, and legal responsibilities of teachers. Academic, physical, emotional, and social well-being.

Grading Option: Satisfactory/unsatisfactory only.

**EDUC 334. Literacy and Technology in the Secondary Classroom. 2 Units.**

A view of literacy expanded beyond typological print, students learn: (1) strategies for incorporating, (2) tools for evaluating and selecting, and (3) learning theories for understanding how information and communication technologies and online resources contribute to general and disciplinary literacy.

Prerequisite: Limited to students accepted into the Teacher Credential Program

Restriction: Graduate students only. Education Majors only.

**EDUC 336. Methods of Teaching Languages other than English in Secondary Schools. 4 Units.**

Prepares future teachers of foreign language or primary/home language. Emphasizes hands-on, practical strategies for communication-based instruction and authentic assessment in reading, writing, listening, speaking, and culture.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 337. Methods of Teaching Social Science in the Secondary School. 4 Units.**

Theories, strategies, and methodologies related to the teaching of history and social science in the secondary school. Emphasis on the planning, delivery, and assessment of lessons reflecting an understanding of the History-Social Science Framework for California.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 338. Methods of Teaching English in the Secondary School. 2-4 Units.**

Introduction to teaching reading, writing, and speaking skills in secondary school. Emphasis upon integrative approach to teaching literature, composition, and grammar consistent with the California State Framework. Practice in the design of lesson plans that are both integrated and cumulative.

Repeatability: May be taken for credit 2 times.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 339. Methods of Teaching Visual and Performing Arts in Secondary Schools. 4 Units.**

Theory, curriculum, and strategies for teaching visual and performing arts in the secondary school. Emphasis on the planning, delivery, and assessment of lessons consistent with California State Framework and content standards.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 340. Methods of Teaching Mathematics in Secondary School. 2-4 Units.**

Theories, strategies, and methodologies related to the teaching of mathematics in the secondary school. Emphasis on the planning, delivery, and assessment of lessons reflecting an understanding of the Mathematics Framework for California and the recommendations of professional organizations.

Repeatability: May be taken for credit for 4 units.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 341. Teaching Science in Secondary School. 4 Units.**

Prospective secondary science teachers learn how to teach science in grades 7-12. Covers State science requirements, a variety of teaching methods, criteria for selecting science curricular materials, and how to plan science lessons, units, experiments, projects, and demonstrations.

Same as ECO EVO 341.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 342. Applied Instructional Strategies in Secondary Schools. 4 Units.**

Application of pedagogy and research to practice teaching experiences in the secondary schools. A continuation of the methodology course series with an emphasis on the needs of students with culturally diverse backgrounds.

Repeatability: May be taken for credit 2 times.

Overlaps with EDUC 342A, EDUC 342B.

Restriction: Teaching Credential Degree students only. EDUC 342 and EDUC 342A-B may not both be taken for credit.

**EDUC 342A. Applied Instructional Strategies in Secondary Schools. 2 Units.**

Application of pedagogy and research to practice teaching experiences in the secondary schools. A continuation of the methodology course series with an emphasis on the needs of students with culturally diverse backgrounds. Conducted in a five-week format.

Repeatability: May be taken for credit 2 times.

Overlaps with EDUC 342.

Restriction: Master of Arts in Teaching Degree students only. EDUC 342 and EDUC 342A may not both be taken for credit.

**EDUC 342B. Applied Instructional Strategies in Secondary Schools. 2 Units.**

Application of pedagogy and research to practice teaching experiences in the secondary schools. A continuation of the methodology course series with an emphasis on the needs of students with culturally diverse backgrounds. Conducted in a five-week format.

Repeatability: May be taken for credit 2 times.

Overlaps with EDUC 342.

Restriction: Master of Arts in Teaching Degree students only. EDUC 342 and EDUC 342B may not both be taken for credit.

**EDUC 345. Child Development and Educational Equity. 4 Units.**

Explores theories of child development applied to teaching and learning in elementary schools. Attention is given to role of cultural norms in defining goals for child development and for educational practices and in creating equal learning opportunities for all children.

Restriction: Graduate students only. Education Majors only.

**EDUC 346. Reading and Writing in Middle School and High School Classrooms. 4 Units.**

Emphasis is placed upon understanding the literacy processes (listening, speaking, viewing, reading, and writing) as they relate to all Single Subject areas. Teachers are guided to integrate literacy-related strategies with curriculum-based goals supported in the California State Frameworks.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 347. Culture, Diversity, and Educational Equity . 4 Units.**

Survey of the history of and social theories about the origins and consequences of U.S. racial, gender, and social inequality, and the effects of poverty and racism on the educational opportunities and outcomes of minority groups in the United States.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 348. Educational Equity and the Exceptional Learner. 2 Units.**

Knowledge, skills, and strategies to teach exceptional learners in the general education classroom. Legislation pertaining to the education of exceptional learners. Role of general education teacher in the special education process. Inclusive curriculum to provide equal access to content.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 348A. Educational Equity and the Exceptional Learner I. 2 Units.**

Focuses on knowledge, skills, and strategies needed to teach special populations in general education secondary classrooms. Covers categories and characteristics of disability and exceptionality, state and federal legislation, and the role of general education teachers in the special education process.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 348B. Educational Equity and the Exceptional Learner II. 2 Units.**

Emphasizes the use of differentiated instruction to meet special needs and the creation of a positive, inclusive learning environment that provides access to the core curriculum for special needs students.

Restriction: Graduate students only. Education-MA/PhD Majors only.

**EDUC 349. Theories and Methods of English Language Development Applied to Secondary Students. 4 Units.**

Theories and methods of English language development and instruction of English language learners, with focus on secondary students. Includes language acquisition theory, language and content, assessment strategies, and preparation of curricula and instruction for grades 7–12 English language learners.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 350. Adolescent Development in Education. 4 Units.**

Secondary teachers must understand adolescent physical, cognitive, emotional, and social development, particularly how educators can promote healthy adjustment in their students. Focuses on why and how changes occur in each of these areas as children grow older.

Restriction: Graduate students only. Education Majors only.

**EDUC 352. Creating a Supportive & Healthy Environment for Student Learning in Secondary Classrooms. 2 Units.**

Creation of healthy environments for student learning in secondary classrooms. Personal, family, school, community, environmental factors. Academic, physical, emotional, social well-being of students. Legal responsibilities of teachers related to student health, safety. Communication with family and use of community resources.

Restriction: Graduate students only. Education Majors only.

**EDUC 358. Media and Information Literacy in the Secondary Classroom. 2 Units.**

Focuses on how teachers can help their students to become critical, ethical, and effective users of technological resources in the secondary classroom. Students learn tools for evaluating, selecting, and incorporating appropriate learning technologies into the secondary classroom.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 359. Curriculum and Methods for Elementary Social Science and Information Literacy. 4 Units.**

Methods of instruction for Social Science at the K–6 level. Includes integration of the use of technology, development of content literacy, and use of evidence to construct arguments.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 361. The Adolescent Learner . 4 Units.**

Issues of adolescent development and learning in family, school, and community contexts from biological, psychological, cognitive, and social perspectives. Focuses on how adolescents learn, what motivates them to learn, and how schools and teachers contribute to adolescents' growth.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 362. Curriculum and Methods for Elementary Language Arts and English Language Development. 4 Units.**

Methods, instructional practices, and assessment strategies for teaching English-Language Arts, with a focus on instructional practices for supporting English Language Learners. Focuses on core language arts topics, including composition of persuasive, expository, and narrative texts; speaking; and listening.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 364. Instructional Design and Education Technology for the Elementary Classroom. 2 Units.**

Focuses on how teachers can effectively integrate educational technologies for teaching and learning in the elementary school classroom. Students learn tools for evaluating, selecting, and incorporating appropriate technologies into their classroom activities.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 373. Cognition and Learning in Educational Settings . 4 Units.**

Foundational concepts in cognition and development as applied to student learning. Primary topics include historical behaviorism, basic cognitive structure and processes, complex cognition, cognitive development, and motivation.

Restriction: Graduate students only. Education Majors only.

**EDUC 374. Learning and Child Development . 4 Units.**

Issues of child development and learning in family, school, and community contexts from biological, psychological, cognitive, and social perspectives. Focuses on how young children learn and develop, how schools and teachers contribute to children's growth, and implications for instruction.

Restriction: Master of Arts in Teaching Degree students only.

**EDUC 398. Special Topics. 3 Units.**

Meets induction and program planning requirements for students enrolled in Professional Administrative Services Credential. Also serves as final course in program, wherein the candidate, the University instructor, and a representative of the involved school district assess and evaluate candidate competency.

Repeatability: May be taken for credit 2 times.

Restriction: Professional Administrative Services Credential students only.

**EDUC 399. University Teaching. 1-4 Units.**

Limited to teaching assistants.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.