250A. Labor Economics (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200A or equivalent. Philosophy, theory and history of American and foreign labor movements; union structure, organization and collective bargaining under changing labor market conditions; current labor market issues. —F. (J.) Stevens

250B. Labor Economics (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 151A or consent of instructor; course 204 or 200A recommended. Microeconomic theory of labor supply and labor demand, estimation of labor supply and demand functions; human capital theory; labor market analysis. —W. (W.) Page

260A. International Economics (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200A or 204. Theory of trade determinants; gains from trade; tariffs and effective protection; economic unions.

260B. International Economics (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: courses 200D and 200E. Balance of payments and adjustment mechanisms; foreign exchange markets; theories of balance of payments policy and international monetary mechanisms. Offered irregularly.

260CN. International Investment and Trade (4)
Seminar—4 hours. Prerequisite: course 200A. Analysis of foreign investment and its links to trade; theories of the firm as they relate to firm’s export and investment decisions; and an introduction to the political economy of trade policies.

260D. Topics in International Macroeconomics (4)
Seminar—4 hours. Prerequisite: course 200B or consent of instructor. Survey of current literature in international macroeconomics. Offered irregularly.

260E. Topics in International Trade (4)
Seminar—4 hours. Prerequisite: course 200A, 260A. Current literature in international trade theory.

260F. International Macroeconomic Policy (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200B. Theory and practice of international macroeconomic policy. Topics include exchange rate regimes, international financial institutions, crises and current topics.

270A. Economics of Growth (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200D. Modern theories and empirics of economic growth beginning with the neoclassical theories up to current endogenous growth models. Emphasis on the analysis of human capital and growth, technological innovation, its diffusion and empirical evidence on growth.

270B. Economics of Growth (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200E. Empirical analysis of growth patterns and growth models. Emphasis on the relationship between macroeconomic management and economic growth; the use of foreign capital in accelerating growth and its occasional missteps; the comparison of growth performance in East Asia and Latin America since WW2; the experiences of centrally-planned economies and transitions to market-based growth; and the transformation from an industrial economy to a knowledge economy.

270C. Economics of Growth (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: course 200D and 200E. Institutional bases; politics and contracts; competition; money and finance; maternal dynamics; modern economic growth; transition of industrialization; dual economies, core and periphery; sources of convergence and divergence; openness and growth; resources, demography, and geography; institutions, imperialism, and class conflicts.

280. Orientation to Economic Research (2)
Discussion—2 hours. Course tries to bridge the gap between students’ classwork and their subsequent research. It deals with topics such as the originigation of a research project, some mechanics of empirical research and hints on the submission of research papers. (S/U grading only.)

290. Topics in Economics (4)
Seminar—4 hours. Prerequisite: consent of instructor. Selected topics in economic analysis and public policy, focusing on current research. May be repeated for credit.

291. Contemporary Economics Seminar (2)
Course—2 hours. Prerequisite: graduate standing in Economics. Seminar series on topics of current interest. May be repeated for credit. (S/U grading only.)

298. Group Study (1-5)
Seminar—2 hours. Prerequisite graduate standing in Economics. Seminar series on topics of current interest. May be repeated for credit. (S/U grading only.)

299D. Dissertational Research (1-12)
(S/U grading only)

Professional

299E. Seminar in Professional Education (2)
Lecture/discussion—2 hours. Prerequisite: graduate standing in Economics. Teaching of economics: methods of instruction, organization of courses, examination and evaluation procedures. (S/U grading only.)

Education, School of

Cynthia Carter Ching, Ph.D., Dean

Cynthia Carter Ching, Ph.D., Associate Dean for Academic Programs and Instruction
Peter C. Mundy, Ph.D., Associate Dean for Academic Personnel and Research
http://education.ucdavis.edu

Faculty

Jamal Abedi, Ph.D., Professor
Rebecca C. Ambrose, Ph.D., Professor
Steven Z. Alphanses, Ph.D., Professor
Heidi L. Ballard, Ph.D., Associate Professor
Cynthia Carter Ching, Ph.D., Associate Professor
Marcela Cuarll, Ph.D., Assistant Professor
Kerry Enright, Ph.D., Associate Professor
Christian Fallis, Ph.D., Professor, Director of Teacher Education
Kevin A. Gee, Ed.D., Assistant Professor
Cristina Gonzalez, Ph.D., Professor
Cassandra M. D. Hart, Ph.D., Assistant Professor
Paul E. Heckman, Ph.D., Professor
Pauline V. Holmes, Ph.D., Lecturer, Supervisor of Teacher Education
Michal Kurlender, Ed.D., Associate Professor
Michele Fortes, Ph.D., Lecturer, Supervisor of Teacher Education
Harold G. Levine, Ph.D., Professor
Lee M. Martin, Ph.D., Associate Professor
M. Lynn Martindale, Ed.D., Lecturer, Supervisor of Teacher Education
Danny C. Martinez, Ph.D., Assistant Professor
Francisco “Paco” Martorell, Ph.D., Assistant Professor
Alvin M. Mendle, M.A., Lecturer, Supervisor of Teacher Education
Peter C. Mundy, Ph.D., Professor
Cynthia Passmore, Ph.D., Professor
Alexis D. Patterson, Ph.D., Assistant Professor

J. Richard Pomeroy, Ph.D., Lecturer, Supervisor of Teacher Education
Patricia Quijada, Ph.D., Associate Professor
Gloria M. Rodriguez, Ph.D., Associate Professor
Rebecca Rosa, M.A., Lecturer, Supervisor of Teacher Education
Heather M. Rose, Ph.D., Associate Professor
Emily J. Solaris, Ph.D., Assistant Professor
Cary J. Trexler, Ph.D., Professor
Yuiko Uchikoshi Tonkovich, Ed.D., Associate Professor
Matt Wallace, Ph.D., Lecturer, Supervisor of Teacher Education
Karen A. Watson-McCoo, Ph.D., Professor
Megan E. Welsh, Ph.D., Assistant Professor
Tobin F. White, Ph.D., Associate Professor

Emeriti Faculty

Donald G. Arnstine, Ph.D., Professor Emeritus
G. Phillip Cartwright, Ph.D., Professor Emeritus
Concha Delgado-Gaitan, Ph.D., Professor Emeritus
Sharon Dugdale, Ph.D., Professor Emeritus
Richard A. Ferigora, Ph.D., Professor Emeritus
Barbara G. Goldman, Ph.D., Professor Emeritus
Barbara J. Merino, Ph.D., Professor Emeritus
Douglas J. Minnis, Ed.D., Lecturer Emeritus
Sandra M. Murphy, Ph.D., Professor Emeritus
Jonathan H. Sandoval, Ph.D., Professor Emeritus
Julius M. Sassenrath, Ph.D., Professor Emeritus
Carlton J. Spring, Jr., Ph.D., Professor Emeritus
Thomas B. Timar, Ph.D., Professor Emeritus
Jan C. Wagner, Ph.D., Professor Emeritus
David R. Wampler, Ph.D., Lecturer Emeritus
George O. Yang, Ph.D., Professor Emeritus
I. Phillip Young, Ph.D., Professor Emeritus

Center for Applied Policy in Education (CAP-ED)

Tina Murdoch, Assistant Director
530-752-1533

Resourcing Excellence in Education (REEd)

Susan O’Hara, Executive Director
916-425-1987

Arthur Beauchamp, Senior Director
530-752-5876

Joanne Bookmyer, Senior Director
530-574-5189

Renee Newton, Senior Director
530-754-4319

Edward Teller Education Center (ETEC)

925-422-5059

Sacramento Area Science Project (SASP)

Cynthia Passmore, Director
530-722-7983

Student Services Office

106 School of Education Building
530-752-5878, Fax 530-754-6672
eduservices@ucdavis.edu

MaryAnn Mellor, Senior Director, Student Support Services, Outreach and Recruitment
530-752-0761

Minor in Education

Program Coordinator: 530-752-2367

Graduate Group in Education (Ph.D.)

Michal Kurlender, Graduate Group Chair
Program Coordinator: 530-752-7259

Capital Area North Doctorate in Educational Leadership (CANDEL)

Gloria Rodriguez, Ph.D., Director
Program Coordinator: 530-754-6664
Master of Arts in Education
Cynthia Carter Ching, Program Chair
Program Coordinator: 530-752-7259

Teacher Education-Credential
Cynthia Carter Ching, Program Chair
Rebecca Ambrose, Co-Director of Teacher Education
Christian Falitis, Co-Director of Teacher Education
, Associate Director of Teacher Education
Program Coordinator: 530-752-0758

Minor Program Requirements:
The UC Davis School of Education is committed to developing informed citizens and advocates for productive educational environments in a democratic society. Education courses are designed for undergraduate students from all majors.

A Minor in Education will help students:
• Develop an understanding of the issues and concerns of public and private education
• Complete prerequisites for the teaching credential program
• Work towards a master’s degree or doctoral degree in education or related field
• Seek employment in policy, advocacy, or other education related careers

Courses. Students must complete 20 units in the Minor program in Education. At least 12 of these 20-unit minimum for the minor must be in Education. The remaining units for the minor may be in education or a related field as approved on the electives list.

Minor Program Requirements: UNITS

Upper Division Required Courses ................................ 12
Education 100, 110, 120.............................. 12

Elective Courses ................................................. 8
The remaining eight units may be taken from the following courses:

Education 115, 181.............................. 3
Education 183.............................. 3
Education 114, 119, 121, 122, 130, 142,
147, 150, 152, 173, 185.............................. 4
Education 192, 198.............................. variable

Approved Courses Outside of Education
Agricultural Education 100.............................. 3
Chicano Studies 192.............................. 1.3
Mathematics 197CT*.............................. 1.5
University Writing Program 197CT*.............................. 2.4
American Indian and African Studies 130
American Studies 152; Asian American
Studies 101; Biological Sciences 195A or
B*, Chicano Studies 132; Economics 152;
Human Development 100A, 100B, 101;
Linguistics 173, 180; Psychology 130, 132,
141; Sociology 124; Spanish 116, 117;
University Writing Program 100A, 100B, 101, 4
* Internship (192, 195A or B, 195CTC, 197CTC, 198,)
and Independent Study (199), or a combination of both, may not exceed a total of four units.
Elective courses may include only one internship.

Minor Advisers. A designated faculty member in the School of Education may advise students and give final approval on the minor. For additional information contact the Student Services office in School of Education Building.

Courses in Education (EDU)

Lower Division

81. Learning in Science and Mathematics (2)
Lecture/discussion—2 hours; field work—2 hours.
Limited to 26 students per section. Exploration of how students learn and develop understanding in science and mathematics classrooms. Introduction to course topics and techniques that are used in K-6 classrooms to illuminate factors that affect student learning. (Same course as Geology 81.) (P/NP grading only.) GE credit: SS, VL, WE, —F, W, S. (F, W, S.) Latimer, Mandel, Stevenson

92. Internship (1-3)
Internship—3-9 hours. Prerequisite: consent of instructor. Enrollment dependent on availability of intern placements. Internship as a teacher’s aide or tutor in K-12 classrooms under the supervision of a faculty member. May be repeated for credit. (P/NP grading only.)

98. Directed Group Study (1-5)
Prerequisite: consent of instructor. Primarily for lower division students. (P/NP grading only.)

Upper Division

100. Introduction to Schools (4)
Lecture—3 hours; field work—3 hours. Study of occupational concerns of teachers; skills for observing classroom activities; school organization and finance; school reform movement; observing, aiding, and tutoring in schools. GE credit: ACGH, DD, OL, SS, —F, W, S. (F, W, S.) Ambrose, Falitis, Marti-
nez, Patterson, Trexler, Tonkovich

110. Educational Psychology: General (4)

114. Quantitative Methods in Educational Research (4)
Lecture/discussion—4 hours. Problems and methods in data analysis. Design of research projects. Some consideration of procedures suited to digital computers. GE credit: QL, (F, ) Martin

115. Educating Children with Disabilities (2)
Lecture—2 hours. Educational issues and processes involved in teaching children with disabilities. The course will focus on the structure of special education, with an emphasis on the educational needs of children who are mainstreamed in regular classes. GE credit: SocSci | SS, —F, S. (F, S.) Mundy, Solari

119. The Use and Misuse of Standardized Tests (4)

120. Philosophical and Social Foundations of Education (4)

121. Introduction to Education Policy Analysis: Tools, Methods and Frameworks (4)
Lecture—3 hours; discussion—1 hour. Introduces students to the field of education policy analysis with a specific emphasis on the quantitative frameworks and analytical tools—drawn primarily from economics and statistics—that are used to guide and inform educational policymaking. GE credit: SocSci| QL, SS, —F, W, S. (F, W, S.) Abedi, Welch

122. Children, Learning and Material Culture (4)
Lecture/discussion—3 hours; extensive writing or discussion—1 hour; fieldwork. Prerequisite: consent of instructor. How material artifacts shape what and how children learn in school, at home, and in the community. Activities include reading books, computers, household appliances, toys and games, entertainment media, collectibles, sports equipment, clothing, folk arts and crafts, and neighborhood space. Offered in alternate years. GE credit: SocSci, Div| Writ| SS, VL, WE, —F, S. (F, S.) Watson-Ggeo, White

130. Issues in Higher Education (4)
Discussion—3 hours; field work—3 hours. Prerequisites: consent of instructor. Analysis of current issues in higher education and of some practical implications of varying philosophical positions on the role of the university. GE credit: SocSci | SS, WE, —F, S. (F, S.) Cuellar, Gonzalez

142. Introduction to Environmental Education (4)
Lecture—3 hours; field work. Study of history, philosophy, sources, principles and approaches to environmental education (EE) and outreach; learning theories, teaching strategies and techniques in EE and outreach; evaluation of EE programs in informal and in-school contexts; observing, aiding and facilitating local environmental education programs. GE credit: SocSci| OL, SS, —S. (J.) Ballard

147. Anglos, Latinos and the Spanish Black Legend: The Origins and Educational Implications of Anti-Hispanic Prejudice (4)
Lecture/discussion—3 hours; field work; term paper. Examination of anti-Hispanic prejudice in the United States focusing on the “Black Legend,” a 16th Century anti-Spanish myth underpinning the doctrine of “Manifest Destiny.” Examination of the legend’s presence in contemporary American society through interviews and analysis. (Same course as Spanish 147.) Offered in alternate years. GE credit: ArtHum, Div| Writ| ACGH, AH, DD, WE, —(F) González

150. Cultural Diversity and Education in a Sociopolitical Context (4)
Lecture/discussion—4 hours, extensive writing. Introduction to cultural diversity and education in a sociopolitical context. Interactive course. Small and large group discussions explore, extend, and apply readings; range of writing genres for responses to assignments and course themes; lectures, slide shows, speakers, brief fieldwork, and presentations. GE credit: SocSci| SS, DD, WE, —F, W, S. (F, W, S.) Alhames, Enright, Martinez

151. Language Development in the Chicano Child (3)
Lecture/discussion—3 hours. Bilingualism, first and second language acquisition, bilingual education, language assessment, Chicano Spanish and the role of dialect varieties in the classroom. Not open for credit to students who have completed course 151T. Offered irregularly.

151T. Language Development in the Chicano Child (3)
Lecture/discussion—3 hours. Prerequisite: acceptance in Teaching Credential Program. Open to UC Davis Teacher Credential candidates only. Open to UC Davis Teacher Credential candidates only. Bilingualism, first and second language acquisition, bilingual education, language assessment, Chicano Spanish and the role of dialect varieties in the classroom. Not open for credit to students who have completed course 151. —(F )

152. Academic Spanish for Bilingual Teachers (3)
Lecture/discussion—3 hours; field work. Prerequisite: Acceptance in Teaching Credential Program or consent of instructor. Communicative class taught in Spanish focused on the development of Spanish communicative skills for current and/or future bilingual teachers. Main topics are related to school content areas in bilingual settings, with an emphasis on standard and Southwest Spanish dialects. Restricted to Spanish speaking students. GE credit: ArtHum or SocSci | AH or SS, OL, WE, —W, (W)

153. Diversity in the K-12 Classroom (2)
Lecture/discussion—2 hours. Prerequisite: acceptance in Teaching Credential Program. Analysis of research on learning styles among culturally diverse students with review and evaluation of responsive curricula and classroom teaching techniques. The ethnographic interview as a research tool. —(F) Fortes, Rosa
160A. Introduction to Peer Counseling (2)
Lecture/discussion—2 hours. Prerequisite: consent of instructor. Introduction to peer counseling techniques and development of interpersonal and communication skills. Offered irregularly. [P/NP grading only.]

160B. Issues in Peer Counseling (2)
Lecture/discussion—2 hours. Prerequisite: consent of instructor. In-depth review and development of skills for specific counseling topics. May be repeated on a time-for-credit when topics differ. Offered irregularly. [P/NP grading only.]

163. Guidance and Counseling (4)
Lecture—4 hours. Nature and scope of pupil personnel services; basic tools and techniques of guidance; theory and practice of counseling psychology, with emphasis on educational and vocational adjustment. Offered irregularly.

173. Language Development (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: Linguistics 1 or consent of instructor; Linguistics 103A, 103B. Theory and research on children’s acquisition of their native language, including the sound system, grammatical systems, and basic semantic categories. [Same course as Linguistics 173.] GE credit: SocSci [SS—F—F (F).] Tankovich

180A. Computers in Education (3)
Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.]—F (F).

180B. Computers in Education (3)
Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program; successful completion of course 180A. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.]—W, W. (W.) Pomeroy, White

180C. Computers in Education (3)
Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program; successful completion of course 180B. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.]—S. (S.) Pomeroy, White

181. Teaching in Science and Mathematics (2)
Lecture/discussion—2 hours; field work—2 hours. Prerequisite: major in mathematics, science, or engineering; or completion of a one-year sequence of science or calculus and consent of the instructor. Class size limited to 40 students per section. Exploration of effective teaching practices based on examination of how middle school students learn math and science. Selected readings, discussion and field experience in middle school classrooms. [Same course as Geology 181.] [P/NP grading only.] GE credit: SS, WE—F, W, S. (F, W, S.) Horn

182. Computer Project for Curricular Integration (1)
Seminar—1 hour. Prerequisite: consent of instructor. Design and implementation of a curricular unit to integrate computer technology into a K-12 classroom setting. A project-based seminar intended for students with substantial prior experience with instructional use of computer related technologies. Not open for credit to students who have completed course 180 or 181. Offered irregularly.

183. Teaching High School Mathematics and Science (3)
Lecture/discussion—2 hours; field work. Prerequisite: course 81/Geology 81 or course 181/Geology 181 and major in mathematics science or engineering; or completion of a one-year sequence of science or calculus and consent of the instructor. Limited to 40 students per section. Exploration and creation of effective teaching practices based on examination of how high school students learn math, sciences and science. Field work in high school classrooms. [Same course as Geology 183.] GE credit: SocSci [OL, SS, WE—F, W, S.] Stevenson

185. Learning in a Digital Age: Information, Schooling, and Society (4)
Lecture/discussion—2 hours, lecture/laboratory—2 hours. Focus on the changing nature of learning in a digital age: social media, ubiquitous connectivity, online educational and professional development, writing, gaming, and youth culture. Readings will be drawn from major recent works detailing fundamental shifts in information, schooling, and society. Offered in alternate years. GE credit: SocSci [OL, VL, SS. —S. (S.) Ching

192. Internship (1-3)
Internship—2.5 hours; discussion—1 hour. Prerequisite: consent of instructor. Internship as a tutor, teacher’s aide, or student teacher in a school or educational counseling setting under the supervision of a faculty member. May be repeated for credit. [P/NP grading only.]—F, W, S. (F, W, S.)

197. Tutoring in Education (1-2)
Tutoring—1.5 hours. Prerequisite: consent of instructor. Leading of small voluntary discussion groups affiliated with the School’s upper division courses under the supervision of, and at the option of, the course instructor. Open to qualified students with a written evaluation of the student’s work. May be repeated one time for credit for a total of 4 units. [P/NP grading only.] Offered irregularly.

198. Directed Group Study (1-5)
Prerequisite: consent of instructor. [P/NP grading only.]

199. Special Study for Advanced Undergraduates (1-5)
Prerequisite: consent of instructor. Offered irregularly. [P/NP grading only.]

Graduate

200. Educational Research (4)
Lecture—2 hours; discussion—2 hours. Prerequisite: introductory statistics and consent of instructor. Defining educational research questions, reviewing relevant literature, developing research designs, developing research instruments, selecting appropriate data analysis procedures, and writing research projects. A case project will provide practice in designing and reporting research. —F (F.) Solari, Welsh

201. Qualitative Research in Education (4)
Seminar—2 hours; lecture—2 hours. Prerequisite: graduate standing or consent of instructor. Examines the design and conduct of educational research using non-numerical data (e.g., text, discourse, imagery and artifacts). Focuses on issues (e.g., validity, reliability, generalizability, ethics) and reporting genres (e.g., narrative accounts, case studies, and arguments).—W. (W.) Enright

202. Computer Analysis of Qualitative Data (4)
Seminar—3 hours; laboratory—2 hours. Critical and practical understanding of how to use computer software programs to analyze qualitative data (text, images, and video) and other unstructured social research. Offered irregularly.

203. Educational Testing and Evaluation (4)
Lecture/discussion—4 hours. Prerequisite: graduate standing or consent of instructor. Introduces the theoretical assumptions underlying traditional test construction, as well as the basic statistical principles involved in the design, evaluation, and interpretation of standardized tests. Also introduces the debates surrounding the use of different kinds of tests and evaluation tools. —F, S (F, S.) Abedi, Welsh

204A. Quantitative Methods in Educational Research: Analysis of Correlational Designs (4)
Discussion—2 hours; laboratory/discussion—2 hours. Prerequisite: introductory statistics or consent of instructor. Topics include multiple correlation, regression, discriminant analysis, logistic regression, and canonical correlation. Emphasizes conceptual understanding of the techniques and use of statistical software. —W. (W.) Kurlander

204B. Quantitative Methods in Educational Research: Experimental Designs (4)
Discussion—2 hours; discussion/laboratory—2 hours. Prerequisite: introductory statistics or consent of instructor. Methods for analysis of experimental data in educational research. Topics include ANOVA, fixed and random effects models, repeated measures ANOVA, analysis of co-variance, MANOVA, chi square tests, small sample solutions to F and ANOVA. —F, S (F, S.)

205A. Ethnographic Research in Schools I: Current Theory and Practice (4)
Lecture—4 hours. Current literature from anthropology and society related to schools. Emphasis on the organizational structure of institutions, and the analysis of face-to-face interaction. Will explore the relationship between field-based research and theory development on the acquisition of knowledge in specific social and cultural contexts. —F (F.) Watson-Gegoe

205B. Ethnographic Research in Schools II: Field-Based Research Projects (4)
Discussion—4 hours. Prerequisite: course 205A. Student research projects in specific schools with cooperative critical analysis of the design, data collection, and interpreting by researchers. Students will continue to meet with instructor as a group throughout the quarter to discuss specific projects. —W. (W.) Watson-Gegoe

206A. Inquiry into Classroom Practice: Traditions and Approaches (2)
Lecture/discussion—2 hours; fieldwork—2 hours. Prerequisite: acceptance in Teacher Credential Program. Introduction to traditions and approaches of teachers conducting research in their own classrooms: purposes, focal areas, methods of data collection and analysis, and written genre conventions. —W. (W.) Athanases, Holmes

206B. Inquiry into Classroom Practice: Application of Teacher Research Approaches (4)
Lecture/discussion—3 hours; fieldwork—1 hour. Prerequisite: satisfactory completion of course 206A or consent of instructor. Open to Graduate Teaching Credential students. Analysis and application of teacher research projects in specific schools with cooperative critical analysis of the design, data collection, and interpreting by researchers. Students will continue to meet with instructor as a group throughout the quarter to discuss specific projects. —W. (W.) Athanases, Holmes, Ballard, Faits, Passmore, White

206C. Inquiry into Classroom Practice: Study Design (4)
Seminar—3 hours; fieldwork—1 hour. Prerequisite: satisfactory completion of course 206B or consent of instructor. Open to Graduate MA Credential students only. Proposal development for classroom-based inquiry design to address specific learning needs. Mixed methods research design and preliminary data collection approaches. Design and application of baseline student assessment for proposal
160A. Introduction to Peer Counseling (2) Lecture/discussion—2 hours. Prerequisite: consent of instructor. Introduction to peer counseling techniques and development of counseling skills. Offered irregularly. (P/NP grading only.)

160B. Issues in Peer Counseling (2) Lecture/discussion—2 hours. Prerequisite: consent of instructor. In-depth review and development of skills for specific counseling topics. May be repeated one time for credit when topics differ. Offered irregularly. (P/NP grading only.)

163. Guidance and Counseling (4) Lecture—4 hours. Nature and scope of pupil personnel services; basic tools and techniques of guidance; theory and practice of counseling psychology, with emphasis on educational and vocational adjustment. Offered irregularly.

173. Language Development (4) Lecture—3 hours; discussion—1 hour. Prerequisite: Linguistics 1 or consent of instructor; Linguistics 103A, 103B. Theory and research on children’s acquisition of their native language, including the sound system, grammatical systems, and basic semantic categories. [Same course as Linguistics 173.] GE credit: SocSci | SS. — F. (F.) Tan Kok-Ching

180A. Computers in Education (3) Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program; successful completion of course 180A. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.] — F. (F.)

180B. Computers in Education (3) Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program; successful completion of course 180A. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.] — W. (W.) Pomeroy, White

180C. Computers in Education (3) Lecture/discussion—1 hour; laboratory—2 hours; project—3 hours. Prerequisite: acceptance in Teacher Credential Program; successful completion of course 180B. Restricted to Teaching Credential Majors. Applications of computers in education as instructional, intellectual, and communication tools. [Deferred grading only, pending completion of sequence.] — S. (S.) Pomeroy, White

181. Teaching in Science and Mathematics (2) Lecture/discussion—2 hours; field work—2 hours. Prerequisite: major in mathematics, science, or engineering; or completion of a one-year sequence of science or calculus and consent of the instructor. Class size limited to 40 students per section. Exploration of effective teaching practices based on examination of how middle school students learn math and science. Selected readings, discussions, and field experiences in middle school classrooms. [Same course as Geology 181.] (P/NP grading only) GE credit: SS, WE—F, W, S. (F, W, S.) Horn

182. Computer Project for Curricular Integration (1) Seminar—1 hour. Prerequisite: consent of instructor. Design and implementation of a curricular unit to integrate computer technology into a K-12 classroom setting. Project-based seminar intended for students with substantial prior experience with instructional use of related technologies. Not open for credit to students who have completed course 180 or 181. Offered irregularly.

183. Teaching High School Mathematics and Science (3) Lecture/discussion—2 hours; field work. Prerequisite: course 81/Geology 81 or course 181/Geology 181 and major in mathematics science or engineering; or completion of a one-year sequence of science or calculus and consent of the instructor. Limited to 40 students per section. Exploration and creation of effective teaching practices based on examination of how high school students learn math and science. [Same course as Geology 183.] GE credit: SocSci | OL, SS, WE—F, W, S. (F, W, S.) Stevenson

185. Learning in a Digital Age: Information, Schooling, and Society (4) Lecture/discussion—2 hours; lecture/laboratory—2 hours. Focus on the changing nature of learning in a digital age: social media, ubiquitous connectivity, online educational communities, writing, gaming, and youth culture. Readings will be drawn from major recent works detailing fundamental shifts in information, schooling, and society. Offered in alternate years. GE credit: SocSci | OL, VL, SS—S. (S.) Ching

192. Internship (1-3) Internship—2-8 hours; discussion—1 hour. Prerequisite: consent of instructor. Internship as a tutor, teacher’s aide, or counselor in a school or educational counseling setting under the supervision of a faculty member. May be repeated for credit. (P/NP grading only) — F, S. (F, W, S.)

197. Tutoring in Education (1-2) Tutoring—1-2 hours. Prerequisite: consent of instructor. Leading of small voluntary discussion groups affiliated with the School’s upper division courses under the supervision of, and at the option of, the course instructor, and the writing of a written evaluation of the student’s work. May be repeated one time for credit for a total of 4 units. (P/NP grading only) Offered irregularly.

198. Directed Group Study (1-5) Prerequisite: consent of instructor. (P/NP grading only)

199. Special Study for Advanced Undergraduates (1-5) Prerequisite: consent of instructor. Offered irregularly. (P/NP grading only)

Graduate

200. Educational Research (4) Lecture—2 hours; discussion—2 hours. Prerequisite: introductory statistics or consent of instructor. Defining educational research questions, reviewing relevant literature, developing research designs, developing research instruments, selecting appropriate data analysis procedures, and writing research projects. A case project will provide practice in designing and reporting research. — F. (F.) Solar, Welsh

201. Qualitative Research in Education (4) Seminar—2 hours; lecture—2 hours. Prerequisite: graduate standing or consent of instructor. Examines the design and conduct of educational research using non-numerical data (e.g., text, discourse, interviews, artifacts) and reporting statistics related to qualitative research. Students will continue to meet with instructor as a group throughout the quarter to discuss specific projects. — W. (W.) Watson-Gego

204A. Quantitative Methods in Educational Research: Analysis of Correlational Designs (4) Discussion—2 hours; laboratory/discussion—2 hours. Prerequisite: introductory statistics or consent of instructor. Topics include multiple correlation and regression, discriminant analysis, logistic regression, and canonical correlation. Emphasis placed on conceptual understanding of the techniques and use of statistical software. — W. (W.) Kurlander

204B. Quantitative Methods in Educational Research: Experimental Designs (4) Discussion—2 hours; discussion/laboratory—2 hours. Prerequisite: introductory statistics or consent of instructor. Methods for analysis of experimental data in educational research. Topics include ANOVA, fixed and random effects models, repeated measures ANOVA, analysis of covariance, MANOVA, chi square tests, small sample solutions to 1 and ANOVA. — F. S.


205B. Ethnographic Research in Schools II: Field-Based Research Projects (4) Discussion—4 hours. Prerequisite: course 205A. Students will conduct research projects in specific schools with cooperative critical analysis of the design, data collection, and interpreting by researchers. Students will continue to meet with instructor as a group throughout the quarter to discuss specific projects. — W. (W.) Watson-Gego

206A. Inquiry into Classroom Practice: Traditions and Approaches (2) Lecture/discussion—2 hours; fieldwork—2 hours. Prerequisite: acceptance in Teacher Credential Program. Introduction to traditions and approaches of teachers conducting research in their own classrooms: purposes, focal areas, methods of data collection and analysis, and written genre conventions. — W. (W.) Athanases, Holmes

206B. Inquiry into Classroom Practice: Application of Teacher Research Approaches (4) Lecture/discussion—3 hours; fieldwork—1 hour. Prerequisite: satisfactory completion of course 206A or consent of instructor. Open to Graduate Teaching Credential students. Analysis and application of teacher research projects in the classroom. Development and implementation of a short-term classroom-based intervention. Particular attention to research that enhances learning of English language learners and under-performing students. — S. (S.) Ambrose, Athanases, Ballard, Falls, Passmore, White

206C. Inquiry into Classroom Practice: Study Design (4) Seminar—3 hours; fieldwork—1 hour. Prerequisite: satisfactory completion of course 206B or consent of instructor. Open to Graduate MA Credential students only. Proposal development for classroom-based inquiry designed to address identified learning needs. Mixed methods research design and preliminary data collection approaches. Design and application of baseline student assessment for proposal
206. Inquiry into Classroom Practice: Data Analysis and Research Reporting (4)
Seminar—2 hours; fieldwork—1 hour; extensive writing or discussion. Prerequisite: satisfactory completion of course 206C or consent of instructor. Open to Graduate MA Credential students. Support of the inquiry begun in course 206C through continuous collaborative critique and feedback resulting in the development of a research project. Open to Graduate MA Credential students. —W. (W.) Ambrose, Fall, Martinez, Wallace

207. Concepts of the Curriculum (4)
Lecture—2 hours; discussion—2 hours. Prerequisite: consent of instructor. Development of the skills of philosophical analysis and argument for the establishment of a point of view, in the consideration of curriculum theory and practice. Classical and contemporary approaches to subject matter and activity emphases, hidden curriculum, and moral education. Offered irregularly.

208. Presenting Educational Research in Written Reports (4)
Seminar—3 hours; extensive writing. Prerequisite: consent of instructor. Rhetorical and substantive challenges of presenting educational research through written reports, research rhetoric and genres; conventions of educational research, policy, and practice; the social organization of publishing educational research. May be repeated one time for credit. Offered irregularly.

209. Image-based Field Research (4)
Lecture/discussion—3 hours; fieldwork—2 hours. Critical and practical understanding of video tape and still photography as resources for enhancing field research in schools and other social settings. Offered irregularly.

210. The Psychology of School Learning (4)

211. Sociocultural and Situative Perspectives on Learning and Cognition (4)

213. Individual Assessment (4)
Lecture—4 hours. Prerequisite: introductory statistics or consent of instructor. Theories of intellectual functioning and the measurement of cognitive abilities in school-aged children. Supervised practice in administration and scoring of contemporary tests for children. Extension of WISC-R, the Stanford Binet, the McCarthy Scales of Children's Ability. Offered in alternate years. —W. (W.) Mundy

215. Research on Achievement Motivation in Education (4)
Seminar—3 hours; term paper. Prerequisite: consent of instructor. Analysis and critique of recent research on cognitive processes related to achievement motivation in school settings. Topics include self-determination theory, goal theory, intrinsic and extrinsic motivation, learned helplessness, psychological reactance, gender and culture, and research design. Offered irregularly.
247. Research on Response to Culturally Diverse Literature, K-12 (4)
Lecture—3 hours; field work—1 hour. Research on response to culturally diverse literature in classrooms and other K-12 settings. Topics include reader response theories, values in expanding the literary canon, and resistance to multicultural literature, and instruction for diverse texts and learners. Offered in alternate years. —Athanases

248. Academic Language and Literacies (4)
Seminar—3 hours; fieldwork, project. Prerequisite: graduate standing or consent of instructor. The role of theories and research on academic language and literacies for the schooling of first and second language learners. Use basic qualitative methods to collect and analyze classroom language and literacy data. Offered in alternate years. —Enright

249. Discourse Analysis in Educational Settings (4)
Seminar—3 hours; term paper. Prerequisite: an introductory linguistics or sociolinguistics course or consent of instructor. Examines form and type in discourse (e.g., narration, conversation, routines), approaches to discourse analysis, and research on classroom discourse (lessons, teaching/learning interactional sequences). Final term paper is an analysis of an extended language event in a student in a field setting. —W. (W.) Watson-Gegeo

251. Research in Bilingual and Second Language Education (3)
Seminar—3 hours. Discussion and analysis of recent research in bilingual and second language education. Topics include: language acquisition in second language learners and bilinguals; second language teaching methods; language use models in bilingual education; the interaction of bilingual/cross-cultural classrooms, use of the vernacular in classroom rooms. Offered irregularly. —Torkovich

253. Language and Literacy in Linguistic Minorities (3)
Seminar—2 hours; field work—2 hours. Prerequisite: acceptance in Teacher Credential Program. Analysis and application of research on oral language development and literacy in language minority students, through the development, implementation, and evaluation of research-based language arts curricula. —S. (S.)

255. Curriculum Development and Evaluation in Mathematics (4)
Seminar—4 hours. Prerequisite: consent of instructor. Analysis of curricular issues and goals in mathematics education, including long-term trends, current status and influences, proposed changes, and evaluation issues. Selected curriculum projects will be examined. Offered irregularly. —Ambrose, White

256A. Research in Mathematics Education (4)
Seminar—4 hours. Prerequisite: consent of instructor. Examination of research process in mathematics education; review of productive problems identified by researchers; evolution of trends, issues, theories and hypotheses in various areas of mathematics education research. Course emphasizes foundations of qualitative research. Offered irregularly. —Ambrose, White

256B. Research in Mathematics Education (4)
Seminar—4 hours. Prerequisite: consent of instructor. Current research issues and activities in mathematics education; status, trends, theories and hypotheses. Formulation of research questions and design of studies. Projection of future directions for research. Offered irregularly. —Ambrose, White

257. Computer Technology in Mathematics Education (4)
Seminar—4 hours. Prerequisite: consent of instructor. The roles of calculators, computers, and graphing calculators in mathematics education will be addressed, with emphasis on the impact of these technologies on curriculum reform. Selected efforts to integrate technology into mathematics instruction will be examined. Offered irregularly. —White

260. The Modern History of Science Education (4)
Seminar—4 hours. Prerequisite: consent of instructor. History of curriculum issues and goals in science education from the late 19th century forward, including long-term trends, current status and influences, proposed changes, and evaluation issues. National science standards and curriculum projects. Offered irregularly. —Passmore

262A. Research Topics in Science Education I (4)
Seminar—4 hours. Prerequisite: consent of instructor. Research process and product in science education; review of critical science education issues; evolution of trends, theories and hypotheses in various areas of science education research. Survey of current major research in science education. Offered irregularly.

262B. Research Topics in Science Education II (4)
Seminar—4 hours. Current research issues and activities in science education; status, trends, theories and hypotheses. Formulation of research questions, design of studies and critical, in-depth review of literature related to the student’s research interests. Offered irregularly.

264. Scientific Literacy and Science Education Reform (4)
Seminar—4 hours. Prerequisite: consent of instructor. Current trends in science education reform locally, regionally, and nationally, focusing on scientific literacy, equity, access and "science for all." Offered irregularly. —Ballard, Patterson, Trexler

270. Research on Teacher Education and Development (4)
Seminar—3 hours; project. Experience with formal or informal teaching recommended. Research on teacher preparation in university credential programs and on professional development of in-service teachers, with special attention to teacher preparation for work with culturally and linguistically diverse youth. Offered irregularly. —Athanases

271. Supervision of Student Teachers: Research, Theory, & Practice (4)
Lecture/discussion—3 hour; fieldwork—1 hour. Research, theory and practice in the preparation and supervision of teachers. Practice in the supervision of candidates in university teaching credential programs during the student teacher field placement and the mentoring of novice teachers by expert teachers. Offered irregularly.

275A. Effective Instruction: Curriculum and Assessment-Theory, Research, and Practice (2)
Lecture/discussion—2 hours. Prerequisite: acceptance in Teacher Credential Program. Restricted to Teaching Credential majors. Examination of contemporary theories of curriculum development, research about the relationship among instructional planning, classroom assessment, and student learning to guide teaching practice. —F. W. (F. W.) Holmes

275B. Effective Instruction: English Language Development and Instructing English Language Learners (2)
Lecture/discussion—2 hours. Prerequisite: acceptance in the Teaching Credential program. Analysis and application of educational acquisition and development research to teaching practice. Particular attention to research that enhances learning of English language learners and under-performing students. —F. (F.) Heckman

280A. Inquiry and Practice: Qualitative Research for Educational Leaders (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students identify problems from their educational settings, engage in data collection/analysis, write-up the process/results, and present to class. Work may become a dissertation proposal, if the problem or its extension is of sufficient interest and value. —F. (F.) Heckman

281B. Problem-Based Learning Courses: Part 2 (4)
Lecture/discussion—4 hours; extensive writing or discussion; fieldwork. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Continued participation with mentor. Students identify problems from their educational settings, engage in data collection/analysis, write-up the process/results, and present to class. Work may become a dissertation proposal, if the problem or its extension is of sufficient interest and value. —F. (F.) Heckman

281C. Problem-Based Learning Courses: Part 3 (4)
Lecture/discussion—4 hours; extensive writing or discussion; fieldwork. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Continued participation with mentor. —W. (W.) Quijada

281A. Problem-Based Learning Courses: Part 1 (4)
Lecture/discussion—4 hours; extensive writing or discussion; fieldwork. Prerequisite: admission into the CANDEL EdD program or consent of instructor. —W. (W.) Quijada

281A. Problem-Based Learning Courses: Part 1 (4)
Lecture/discussion—4 hours; extensive writing or discussion; fieldwork. Prerequisite: admission into the CANDEL EdD program or consent of instructor. —W. (W.) Quijada

282A. Beginning Issues and Practices: Contemporary Educational Leadership (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students explore the history and emergent relationships among leadership theories/practice and their application to current educational settings. Students will reflect on and refine their personal theory of leadership. —F. (F.) Rodrigue

282B. Beginning Issues and Practices: Diversity Issues for Educational Leaders (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. The diversity of stakeholders and community issues in California schools and colleges will be explored. Emphasis will be placed on the interaction between underrepresented segments of society and educational institutions. Cross cultures in leading diverse schools will be explored. —W. (W.) Cuellar

283A. Advanced Issues and Practices: Leadership Across Communities (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students examine the theory/practice/process of leadership in community building and collaboration across communities, while addressing the utilization of human and material resources and the creation of partnerships, community linkages, and collaborative efforts. —S. (S.) Kurkjian

283B. Advanced Issues and Practices: Leadership and Student Services (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Practical and theoretical per-
spectives for building a sense of vision to lead the profession of student affairs and to meet the needs of the whole student. Emphasis is placed on teaching, advising, and helping students learn and analyze the history and theory of educational policy. They see how education leaders have/can positively influence the process and implement effective policies in their local institutions. Policies covered: educational opportunity, equity, access, regulation, testing, tenure, accountability. — F (F)

284B. Policy: Formulating and Influencing Policy (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students will conduct critical analyses of policy at the federal, judicial, state, regional and local levels. Specific California and federal policy environment structures, processes and people will be examined for intended consequences, ethical dilemmas, social justice and equity issues. — W (W) Martorell

284C. Policy: Possibilities and Limitations of Educational Policy in a Democracy (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students will critically examine the democratic purposes of education in light of existing National, State, and local policy reform efforts. Questions like, In what ways are these reforms driven and moderated by democratic ideas and challenged by those ideas. — W (W)

Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Topics include: education finance, teacher salary, teacher compensation and other factors related to educational policy priorities; intergovernmental relations, effective resource management, budget analysis and preparation. — S. (S) Rose

Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Human resource management research and strategy for applying human resource techniques in the educational setting. — S. (S)

286A. Organizational Structures and Change: Data-Driven Decision-Making for Change (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. Students use and examine multiple sources of information and data and trends found in P-12 and college settings in order to make data-driven decisions to improve P-12 and college classrooms across content areas. Students will learn limitations of these data sources. — F (F) Heckman

286B. Organizational Structures and Change: Curriculum & Instruction Issues in Education (4)
Lecture/discussion—4 hours; fieldwork; project. Prerequisite: admission into the CANDEL EdD program or consent of instructor. This course addresses the historical development of various curriculum and instructional methodologies found in public and private schools, and their impact on current curriculum development and reform efforts at the national, state and local level. — W (W)

287. CANDEL Dissertation Seminars (6-12)
Prerequisite: admission into the CANDEL EdD program or consent of instructor. Third year seminars encourage students to complete dissertations within the year. Cohort members meet together in every three-week meetings with faculty members and share their writing progress, collection, analysis, discussion of results, development of conclusions/implications. May be repeated nine times for credit until completion of dissertation. (S/U grading only). — F, W, S. (F, W, S)

287D. CANDEL Dissertation (6-12)
Prerequisite: passing of qualifying exams in CANDEL program and advancement to candidacy; consent of instructor. Cohort members continue to meet with faculty members to discuss data collection and analysis, development of conclusions/implications. May be repeated nine times for credit until completion of dissertation. (S/U grading only). — F, W, S. (F, W, S)

291. Proseminar in Education (4)
Seminar — 3 hours; fieldwork — 3 hours. Prerequisite: admission to the M.A. or Ph.D. graduate program in Education. Professional induction into educational research traditions and Graduate Group in Education at UC Davis. Introduction to landscape of educational research methodologies, purposes and theories. Analysis of debates within field. Investigation of K-12 educational policy and practice. May be repeated twice for credit. May take the course one time as an MA student and one time as a PhD student. — F, W, S. (F) Ambrose, Martinez, Solari, Welsh

292. Special Topics in Education (2-4)
Variable — 2-4 hours. Prerequisite: consent of instructor. Selected topics in education. Designed to facilitate preparation for the qualifying examination or dissertation. Students will critically analyze scholarly work including their own works in progress. May be repeated for credit. — F, W, S. (F, W, S)

294. Special Topics in Science, Agriculture and Mathematics Education (4)
Seminar — 3 hours, term paper, project. Critical study of special topics of research relevant to science, agricultural and mathematics education. Students and faculty present work in progress on a major research project or dissertation. Students will critically analyze scholarly work including their own works in progress. May be repeated for credit. — F, W, S. (F, W, S)

295. Special Topics in Learning and Mind Science (4)
Seminar — 3 hours, term paper. Critical study of selected issues in the learning sciences, neurodevelopmental disorders, and the principles of education in the arts. Understanding school literacy practices and strategies for engaging English-speaking and bilingual students with textual, image, and digital literacies across content areas. Covers reading and writing, the Common Core and Language Proficiency standards. — F, W, W (F, W) Falts, Martinez

301B. Teaching Literacy in High School Contexts (2)
Lecture/discussion — 2 hours. Prerequisite: acceptance in Teacher Credential Program; consent of instructor. Restricted to students enrolled in the secondary credential program. Focuses on secondary school literacy practices and strategies for engaging English-speaking and bilingual students with textual, image, and digital literacies across content areas. Covers reading and writing, the Common Core and Language Proficiency standards. — F, W, W (F, W) Falts, Martinez

302. Language Arts in the Elementary School (2)
Lecture — 2 hours. Prerequisite: acceptance in Teacher Credential Program. Principles, procedures, and materials for the teaching of oral and written expression, listening skills, drama, and children’s literature in elementary schools. Offered irregularly.

303. Art Education in the Elementary School (2)
Lecture/discussion — 2 hours. Prerequisite: acceptance in Teacher Credential Program. Understanding the principles of education in the arts through participation. Development of concepts, introduction to media, and techniques suitable for the elementary school. Curriculum, pedagogy, and materials for teaching the visual and performing arts curriculum in elementary schools. — S. (S)

304A. Teaching in the Elementary Schools (2-18)
Lecture/discussion — 2 hours; fieldwork — 9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular classrooms in elementary schools. Selection and organization of teaching materials. Introduction to techniques of diagnosing school achievement of children. — F. (F)

304B. Teaching in the Elementary Schools (2-18)
Lecture/discussion — 2 hours; fieldwork — 9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular classrooms in elementary schools. Selection and organization of teaching materials. — W. (W)

304C. Teaching in the Elementary Schools (2-18)
Lecture/discussion — 2 hours; fieldwork — 9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular classrooms in elementary schools. Evaluation of teaching materials including instructional technology. Current elementary school curriculum with emphasis on contributions from the social, biological, and physical sciences. Emphasis on effective teaching methods. — W. (W)

305A. Teaching in the Middle Grades (5-8)
Lecture — 2 hours; seminar — 2 hours; student teaching — 15-30 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular classrooms in elementary schools. Evaluation of teaching materials including instructional technology. Current elementary school curriculum with emphasis on contributions from fine arts and humanities. — S. (S)

305B. Teaching in the Middle Grades (5-8)
Lecture — 2 hours; seminar — 2 hours; student teaching — 15-30 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular classrooms in elementary schools. Evaluation of teaching materials including instructional technology. Current elementary school curriculum with emphasis on contributions from fine arts and humanities. — S. (S)
regular or special education classrooms in middle grades. Current conceptions of the middle-grades curriculum with an emphasis on social, biological, and physical sciences. Effective teaching methods. Offered irregularly.

306A. Teaching in the Secondary Schools (2-18)
Lecture/discussion—2 hours; fieldwork—9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular secondary classrooms. Techniques for classroom communications; developing goals and objectives; assessment of learning; special problems of adolescents; instructional technology. —F (F)

306B. Teaching in the Secondary Schools (2-18)
Lecture/discussion—2 hours; fieldwork—9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular secondary classrooms. Techniques for classroom communications; constructing goals and objectives; assessment of learning; special problems of adolescents; instructional technology. —W (W)

306C. Teaching in the Secondary Schools (2-18)
Lecture/discussion—2 hours; fieldwork—9-48 hours. Prerequisite: acceptance in Teacher Credential Program. Supervised teaching in regular secondary classrooms. Techniques for classroom communications; constructing goals and objectives; assessment of learning; special problems of adolescents; instructional technology. —S (S)

307. Methods in Elementary Science (2)
Lecture/discussion—2 hours. Prerequisite: accep-
tance in Teacher Credential Program. Principles, pro-
cedures, and materials for teaching the physical and biological sciences in elementary schools. —F (F) Patterson, Passmore, Trelser

308. Methods in Elementary Social Studies (2)
Lecture/discussion—2 hours. Prerequisite: accep-
tance in Teacher Credential Program. Principles, pro-
cedures, and materials for teaching the history and the social sciences in elementary schools. —W (W) Rosa

309. The Teaching of Mathematics, K-9 (3)
Lecture/discussion—3 hours. Prerequisite: accep-
tance in Teacher Credential Program. Mathematics curriculum and teaching methods for K-9 reflecting the needs of California’s diverse student populations. —W (W) Mendlle

322A. Pedagogical Preparation for Secondary Social Science I (3)
Lecture/discussion—3 hours; discussion—1 hour. Prerequisite: acceptance in Teacher Credential Program. Introduction to teaching methods and curriculum approaches for secondary social science teaching. State and national curriculum standards; application of learning theory to effective instruction; interdisciplinary teaching and active learning approaches; effective teaching strategies for English Learners. —F (F) Passmore, Pomery

322B. Physical Science in the Secondary School (3)
Laboratory/discussion—2 hours; discussion/labora-
tory—1 hour. Prerequisite: acceptance in Teacher Credential Program. Activity-based overview of con-
cepts and processes in secondary school physical sciences. Emphasis upon philosophy, appropriate teaching methods, materials, assessment and evaluation of learning. —F (F) Passmore, Pomery

323A. Life Sciences in the Secondary School (3)
Laboratory/discussion—2 hours; discussion/labora-
tory—1 hour. Prerequisite: acceptance in Teacher Credential Program. Activity-based overview of con-
cepts and processes in secondary school biology and life sciences. Emphasis on philosophy, appropri-
ate teaching methods, materials, assessment and evaluation of learning, and issues. —W (W) Pass-
more, Pomery

324A. Methods and Technology in Secondary Mathematics I (4)
Lecture/discussion—4 hours. Prerequisite: accep-
tance in Teacher Credential Program. Consent of instructor. Introduction to methods and curriculum for teaching mathematics at the secondary level. Intro-
duction to applications of computer technology as instruc-
tional, and instructional technology for mathematics teachers. —F (F) Wallace

324B. Methods in Secondary Mathematics II (3)
Lecture/discussion—3 hours. Prerequisite: accep-
tance in Teacher Credential Program; consent of instructor. Expansion of methods and curriculum for teaching mathematics at the secondary level. Inter-
mediate applications of computer technology as instruc-
tional, and instructional technology in mathematics teaching. —W (W) Wallace

325. Research and Methods in Secondary English Language Arts (4)
Discussion—4 hours. Prerequisite: acceptance in Teacher Credential Program; consent of instructor. Research on teaching and learning in the language arts. Principles, procedures and materials for improving the writing, reading and oral language of sec-
tary students, with special attention to students from culturally and linguistically diverse popula-
tions. —F (F) Holmes

326. Teaching Language Minority Students in Secondary Schools: Methods and Research (4)
Seminar—3 hours; field work—3 hours. Prerequisite: acceptance in Teacher Credential Program; consent of instructor. Research on principles, procedures and curricula for teaching discipline-specific concepts to language-minority students in secondary schools. —S (S) Jade Hernandez, Professor

327A. Teaching Methods for Secondary Foreign Language/Spanish, Part I (3)
Lecture—3 hours. Prerequisite: acceptance in Teacher Credential Program. Introduction to methods for teaching Spanish as a foreign and a heritage language in secondary schools. State and National Standards. Theories on second language acquisi-
tion. Lesson plans. Effective teaching strategies and class management. —W (W) Casas

327B. Teaching Methods for Secondary Foreign Language/Spanish, Part II (3)
Lecture—3 hours. Prerequisite: acceptance in Teacher Credential Program. Continuation to meth-
ods for teaching Spanish as a foreign and a heritage language in secondary schools. Research and practice on foreign and heritage language teaching. Expansion of effective teaching strategies and class management. Open to Graduate Teaching Creden-
tial students. Offered irregularly.

398. Group Study (1-5)
(S/U grading only)

399. Individual Study (1-5)
(S/U grading only)

Fall 2011 and on Revised General Education (GE) A = Arts and Humanities; S = Science and Engineering; SS = Social Sciences, ACGH = American Cultures, DD = Diversity, OL = Oral Skills, SL = Quantitative, VL = Visual, WC = World Cultures, WE = Writing Experience Pre-Fall 2011 General Education (GE) AH = Arts and Humanities; SCI = Science and Engineering; SD = Social Sciences; DI = Diversity; WR = Writing Experience Quarter Offered: F = Fall, W = Winter, S = Spring, Su = Summer; 2017-2018 offering in parentheses