

244 / Programs and Courses

education day class for individuals with moderate/severe disabilities. Required for the Education Specialist Internship Credential in Moderate/Severe Disabilities. Graded Satisfactory (S) or No Credit (NC).

EDUC 348A. Single Subject Credential Seminar (2) Seminar, 2 hours. Prerequisite(s): EDUC 110, EDUC 139, EDUC 174; concurrent enrollment in EDUC 378A. Analyzes instructional problems encountered by candidates in the single subject classroom. Topics include basic curriculum, classroom management, interpersonal relationships, self-evaluation, and professional competencies. Credit is awarded for only one of EDUC 348A or EDUC 349A.

EDUC 348B. Single Subject Credential Seminar (2) Seminar, 2 hours. Prerequisite(s): EDUC 348A; concurrent enrollment in EDUC 378B. Analyzes instructional problems encountered by candidates in the single subject classroom. Topics include basic curriculum, classroom management, interpersonal relationships, self-evaluation, and professional competencies. Credit is awarded for only one of EDUC 348B or EDUC 349B.

EDUC 348C. Single Subject Credential Seminar (2) Seminar, 2 hours. Prerequisite(s): EDUC 348B; concurrent enrollment in EDUC 378C. Analyzes instructional problems encountered by candidates in the single subject classroom. Topics include basic curriculum, classroom management, interpersonal relationships, self-evaluation, and professional competencies. Credit is awarded for only one of EDUC 348C or EDUC 349C.

EDUC 349A. Single Subject Student Teaching Seminar (2) Seminar, 2 hours. Prerequisite(s): concurrent enrollment in EDUC 376A. Analyzes applied problems in the process of instruction in the single subject classroom. Also addresses interpersonal relationships.

EDUC 349B. Single Subject Student Teaching Seminar (2) Seminar, 2 hours. Prerequisite(s): EDUC 349A; concurrent enrollment in EDUC 376B. Analyzes applied problems in the process of instruction in the single subject classroom. Also addresses interpersonal relationships.

EDUC 349C. Single Subject Student Teaching Seminar (2) Seminar, 2 hours. Prerequisite(s): EDUC 349B; concurrent enrollment in EDUC 376C or EDUC 345A or EDUC 345B. Analyzes applied problems in the process of instruction in the single subject classroom. Also addresses interpersonal relationships.

EDUC 354A. Orientation to Educational Administration and Policy (4) Seminar, 15 hours per quarter; field, 7.5 hours. Prerequisite(s): admission to the Preliminary Administrative Services Credential program. Orientation to the field of educational administration and policy formation. Focuses on analysis, management skills, and mentoring.

EDUC 354B. Competence in Educational Administration and Policy (4) Seminar, 15 hours per quarter; field, 7.5 hours. Prerequisite(s): EDUC 354A; admission to the Preliminary Administrative Services Credential program. Evaluation of the students' skills in educational administration and policy formation. Students present professional growth portfolios demonstrating their competence in inquiry, reflection, and problem solving.

EDUC 355. Field Experience in School Administration (4) Lecture, 3 hours; field, 3-15 hours. Prerequisite(s): consent of instructor. Supervised field experience. The planning, execution and evaluation of administrative tasks under the supervision of local school administrators and university personnel. May be repeated for credit.

EDUC 365A. Advanced Study of Educational Administration and Policy Formation (4) Seminar, 2 hours; field, 6 hours. Prerequisite(s): admission to the Professional Administrative Services Credential program. Advanced study of educational administration and policy formation. Emphasis is on analysis and problem solving. Topics include interpersonal relationships, mentoring, policy development, and policy administration.

EDUC 365B. Advanced Study of Educational Administration and Policy Formation (4) Seminar, 2 hours; field, 6 hours. Prerequisite(s): admission to the Professional Administrative Services Credential program. Evaluation of the students' skills in educational administration and policy development. Students present professional growth portfolios demonstrating their competence in inquiry, reflection, and problem solving.

EDUC 366. Specialized Field Experience in School Administration (4) Seminar, 3 hours; fieldwork, 10-15 hours. Prerequisite(s): EDUC 365A- EDUC 365B; possession of California Preliminary Administrative Services Credential or equivalent; an administrative job in education or consent of instructor. Advanced level field experience covering special topics in educational administration. Individually planned and guided tasks in an area of specialized study, selected in consultation with faculty and executed under the supervision of selected school administrators and University faculty.

EDUC 376A. Supervised Teaching in the Secondary School (2) Field, 9 hours. Prerequisite(s): concurrent enrollment in or completion of EDUC 110, EDUC 139, EDUC 174, EDUC 377A; admission to a teaching credential program; concurrent enrollment in EDUC 349A. Supervised teaching in the single subject classroom. Required of all candidates for the Single Subject Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376A or EDUC 378A.

EDUC 376B. Supervised Teaching in the Secondary School (5) Field, 18 hours. Prerequisite(s): EDUC 376A; concurrent enrollment in or completion of EDUC 377B; concurrent enrollment in EDUC 349B. Supervised teaching in the single subject classroom. Required of all candidates for the Single Subject Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376B or EDUC 378B.

EDUC 376C. Supervised Teaching in the Secondary School (11) Field, 36 hours. Prerequisite(s): EDUC 376B; concurrent enrollment in or completion of EDUC 377C; concurrent enrollment in EDUC 349C. Supervised teaching in the single subject classroom. Required of all candidates for the Single Subject Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376C or EDUC 378C.

EDUC 377A. Teaching Performance Assessment for Single Subject Candidates (1) Field, 2 hours; written work, 2 hours. Prerequisite(s): admission to a teaching credential program or an intern teaching program; concurrent enrollment in or completion of EDUC 376A or concurrent enrollment in or completion of EDUC 378A. Performance assessment for California teachers. Topics include lesson design, classroom instruction in public schools, and assessment design. Fieldwork hours completed in regular placement as assigned for EDUC 376A or EDUC 378A. Required of all candidates for the Single Subject Credential. Graded Satisfactory (S) or No Credit (NC).

EDUC 377B. Teaching Performance Assessment for Single Subject Candidates (1) Field, 2 hours; written work, 2 hours. Prerequisite(s): admission to a teaching credential program or an intern teaching program; concurrent enrollment in or completion of EDUC 376B or concurrent enrollment in or completion of EDUC 378B. Performance assessment for California teachers. Topics include lesson design, classroom instruction in public schools, and assessment design. Fieldwork hours completed in regular placement as assigned for EDUC 376B or EDUC 378B. Required of all candidates for the Single Subject Credential. Graded Satisfactory (S) or No Credit (NC).

EDUC 377C. Teaching Performance Assessment for Single Subject Candidates (1) Field, 2 hours; written work, 2 hours. Prerequisite(s): admission to a teaching credential program or an intern teaching program; concurrent enrollment in or completion of EDUC 376C or concurrent enrollment in or completion of EDUC 378C. Performance assessment for California teachers. Topics include lesson design, classroom instruction in public schools, and assessment design. Fieldwork hours completed in regular placement as assigned for EDUC 376C or EDUC 378C. Required of all candidates for the Single Subjects Credential. Graded Satisfactory (S) or No Credit (NC).

EDUC 378A. Intern Teaching in the Secondary School (9) Field, 30 hours. Prerequisite(s): EDUC 110, EDUC 139, EDUC 174; admission to intern teaching program; concurrent enrollment in or completion of EDUC 377A; concurrent enrollment in EDUC 348A. Intern teaching in the single subject classroom. Required for the Single Subject Internship Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376A or EDUC 378A.

EDUC 378B. Intern Teaching in the Secondary School (9) Field, 30 hours. Prerequisite(s): EDUC 378A; concurrent enrollment in or completion of EDUC 377B; concurrent enrollment in EDUC 348B. Intern teaching in the single subject classroom. Required for the Single Subject Internship Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376B or EDUC 378B.

EDUC 378C. Intern Teaching in the Secondary School (9) Field, 30 hours. Prerequisite(s): EDUC 378B; concurrent enrollment in or completion of EDUC 377C; concurrent enrollment in EDUC 348C. Intern teaching in the single subject classroom. Required for the Single Subject Internship Credential. Graded Satisfactory (S) or No Credit (NC). Credit is awarded for only one of EDUC 376C or EDUC 378C.

Education Abroad Program

Michael Cowan, Ph.D., Acting Executive Director
Universitywide Program Office,
Goleta, CA

UCR Contact Office
International Education Center
1669 Statistics-Computer Bldg.
(951) 827-3779
internationalcenter.ucr.edu

Search for programs by specific areas at http://eap.ucop.edu/our_programs

EAP Opportunities and Countries¹

(visit internationalcenter.ucr.edu for updates)

Applications due in		Applications due in	
Oct./Nov. Jan. April/May		Oct./Nov. Jan. April/May	
Australia² — Adelaide—The University of Adelaide		Hungary — Budapest—Central European University	
Brisbane—The University of Queensland		Fall, Year	•
Canberra—The Australian National University		Spring	•
Melbourne—La Trobe University; Monash University;		India — Delhi—University of Delhi;	
The University of Melbourne		Hyderabad—University of Hyderabad	
Perth—The University of Western Australia		Fall	•
Sydney—The University of New South Wales;		Ireland (Republic of) — Cork—National University	
Sydney—The University of Sydney		of Ireland;	
Wollongong City—The University of Wollongong		Dublin—Trinity College; University College;	
Fall	•	Galway City—National University of Ireland	
Year, Spring	•	Year	•
Barbados — Cave Hill—University of the West Indies		Israel — Jerusalem—Hebrew University	
Fall, Year, Spring	• •	Fall, Year, Spring	• •
Brazil² — Rio de Janeiro—Pontifical Catholic University;		Italy — Bologna—University of Bologna;	
Brazil—United States Cultural Association		Milan—University of Commerce Luigi Bocconi;	
Fall	•	Padova—University of Padova;	
Year, Spring	•	Rome—UC Center in Rome;	
Canada — Vancouver—The University of British		Siena—UC Center in Siena; University of Italian	
Columbia		Studies for Foreigners	
Fall, Year	•	Summer, Fall, Year	• •
Chile² — Concepción—UC Center		Winter Quarter/Spring Semester	•
Santiago—Pontifical Catholic University of Chile;		Siena Spring Quarter	•
University of Chile		Japan — Kyoto—Doshisha University; Kyoto University	
Fall	•	Osaka—Osaka University;	
Year, Spring	•	Sendai—Tohoku University	
China — Beijing—Beijing Normal University; Peking University;		Tokyo—International Christian University; Hitotsubashi	
Shanghai—East China Normal University;		University; Keio University, Sophia University;	
Fudan University		The University of Tokyo;	
Fall, Summer, Year	• •	Tsukuba Science City—University of Tsukuba;	
Spring	•	Tsuru City—Tsuru University	
Costa Rica² — Monteverde—Monteverde Institute		Yokohama—Meiji Gakuin University	
San José—University of Costa Rica		Year	•
Fall, Spring	•	Fall	• •
Spring	•	Spring	• •
Denmark — Copenhagen—University of Copenhagen		Korea (Republic of) — Seoul—Yonsei University	
Summer, Fall, Year	•	Fall, Year	•
Egypt — The American University in Cairo		Mexico — Mexico City—National Autonomous	
Year	•	University of Mexico; UC Center in Mexico City;	
France — Bordeaux—University of Bordeaux		Morelia—San Nicolás de Hidalgo University of	
Lyon—University of Lyon		Michoacán	
Paris—École Normale Supérieure, rue d'Ulm; Institut		Summer, Fall, Year	•
d'Études Politiques (Sciences Po);		Spring	•
UC Center in Paris		The Netherlands — Leiden—Leiden University	
Fall, Year	•	Maastricht—University College; Maastricht University;	
Spring	•	Utrecht—University College; Utrecht University	
Germany — Berlin—Free University; Humboldt		Fall, Year	•
University; Technical University;		Spring	•
Potsdam—University of Potsdam		New Zealand² — Auckland—University of Auckland	
Year, Fall	•	Christchurch—Lincoln University, University of	
Spring	•	Canterbury; Dunedin—University of Otago;	
Ghana — Legon—University of Ghana		Hamilton—University of Waikato; Palmerston	
Fall, Year	•	North—Massey University; Wellington—Victoria University	
Hong Kong — The Chinese University of		Year	•
Hong Kong; Hong Kong University of Science		Philippines — (program on hold for 2008-2009)	
and Technology; University of Hong Kong		Russia — Moscow—International University	
Fall, Year	•	Fall	•
Spring	•	Singapore — National University of Singapore	
India — Delhi—University of Delhi;		Fall, Year	•
Hyderabad—University of Hyderabad		Spring	•
Fall	•	South Africa² — Cape Town—University of Cape Town	
Ireland (Republic of) — Cork—National University		Durban—University of KwaZulu-Natal;	
of Ireland;		Pietermaritzburg—University of KwaZulu-Natal	
Dublin—Trinity College; University College;		Fall	•
Galway City—National University of Ireland		Spring, Year	•
Year	•		

¹ Check internationalcenter.ucr.edu or visit the International Education Center for program details.

² The academic year begins in the winter.

EAP Opportunities and Countries¹

(visit internationalcenter.ucr.edu for updates)

Applications due in
Oct./Nov. Jan. April/May

Spain — Barcelona—Autonomous University of Barcelona; University of Barcelona; Córdoba—University of Córdoba; Granada—University of Granada; Madrid—Carlos III University; Complutense University of Madrid			
Fall, Year		•	
Spring			•
Sweden — Lund—University of Lund			
Fall, Year, Summer		•	
Taiwan — Taipei—National Taiwan University			
Fall, Year		•	
Thailand — Bangkok—Thammasat University			
Fall, Year		•	
Spring			•
Turkey — Ankara—Bilkent University; Middle East Technical University			
Fall, Year, Spring		•	
United Kingdom —			
England — Brighton—University of Sussex Bristol—University of Bristol Canterbury—University of Kent Coventry—University of Warwick Durham—University of Durham Leeds—University of Leeds London—Cambridge University (Pembroke College), Imperial College University of London (King's College; Queen Mary and Royal Holloway); Manchester—University of Manchester Norwich—University of East Anglia UC-London Bloomsbury Center York—University of York			
Scotland — Edinburgh—The University of Edinburgh Glasgow—University of Glasgow St. Andrews—University of St. Andrews			
Year		•	
Summer, Fall			•
Vietnam — Hanoi—Hanoi University			
Fall			•

¹ Check internationalcenter.ucr.edu or visit the International Education Center for program details and latest updates.

² The academic year begins in the winter.

Purpose

The Education Abroad Program (EAP) offers students the opportunity to experience a different culture while earning UC credit. Established in 1961, the EAP is an overseas study program that serves students at all UC campuses. International study options are available in 34 countries throughout the world at the finest universities abroad.

Most of the program study centers are directed by a UC faculty member in residence. The directors and staff advise students on academic, cultural, social, and personal matters, and the centers serve as information centers for cultural and social opportunities.

Stimulation of general intellectual development, enhancement of independent study and second language skills, improved prospects for graduate and professional school admission, an increase of self-awareness, clarification of career and life purposes, and a broadening and deepening of personal values are a few of the advantages gained from this opportunity.

Academic Program

See internationalcenter.ucr.edu for partner universities and study options. Participants may fulfill lower-division, degree, major, or elective requirements and often enhance their UC education by taking courses not available at UCR. The study center director facilitates the academic work of the students through liaison with faculty at the host university.

Spanning all continents, EAP offers traditional academic year, short-term, and summer programs. Students who want to gain basic foreign language skills have Language and Culture options. Thematic options include Engineering in Hong Kong and Japan, Environmental Sciences in Australia, Tropical Biology in Costa Rica, Asian Development Studies, and Health Sciences. Students anticipating a business career have a broad range of locations to enhance their preparation, including in-depth study on NAFTA, the European Union, and Central Europe. Internships can be arranged in nearly all fields of study. Future teachers, in particular, have benefited from teaching opportunities in China, Japan, and Mexico. Undergraduates have several possibilities to conduct field research in Costa Rica, Ghana, Mexico, and South Africa.

Depending upon the study center, EAP also provides a 5- to 10-week Intensive Language Program, which prepares students for the new country and academic system by augmenting the prerequisite language background.

Academic Planning

Interested students should consult well in advance with their academic advisor and college counselor to determine how participation in the program would affect their degree progress. Students with a double major or minor must pay particular attention to pre-departure planning.

Search for programs by specific areas of study at http://eap.ucop.edu/our_programs.

Seniors and transfer students must receive clearance of the university's graduation residence requirement from their college dean. Refer to the Residence Requirement section under Academic Regulations.

To record units and grade points earned through EAP on the participant's UCR transcript, students are concurrently enrolled at UCR and at the host university. Subsequent fulfillment of major and degree requirements depends upon UC departmental and campus criteria.

Eligibility and Selection

Requirements vary widely by program option. For most programs, students must meet the cumulative grade point average requirements of partner universities at the time of selection and maintain the support of the UCR Selection Committee throughout the pre-departure period.

In addition to academic criteria, the Selection Committee attaches much importance to indications of the student's seriousness of purpose, maturity, clear goals, and the capacity to adapt to the experience of study abroad.

Prior to departure, selected students must obtain clearance from the university's Student Health Service, participate in orientation activities, and take a language placement proficiency test, where applicable.

Graduate students who have completed at least one year of graduate work and have the approval of their department and the Graduate Division are eligible for some EAP study centers. Foreign language proficiency, if required, must be demonstrated. Graduate students remain under the academic direction of their UCR graduate advisor. An EAP experience may prove especially valuable to doctoral candidates who have been advanced to candidacy and are engaged in independent study and research directed toward their dissertation.

Financial Matters

EAP is financially comparable to studying at UCR. In some cases, study on EAP costs less. Additional costs directly related to the program are round-trip transportation, health clearance, on-site orientation, and, if required, intensive language instruction. The university shares the cost of comprehensive medical and hospitalization coverage for all participants.

Many forms of financial assistance are available to EAP participants. Students who do not currently receive UC financial aid may qualify for aid while on EAP. Students receiving state and federal financial aid may use their scholarships, grants, loans, and veteran's benefits to finance their program abroad. In addition to campus-awarded financial aid, EAP provides support through various scholarships and grants. Prospective participants should consult early with EAP counselors for national scholarship opportunities.

Student Conduct

Students selected for the EAP program have made a serious commitment to profit from all aspects of their international experience. As guests in another country and another university, their conduct reflects on both the UC and the United States. Students are responsible to the study center director, to the director of EAP, and to the faculty of the UC and the host university related to the program. The director of EAP reserves the right to terminate the participation in the program of any student whose conduct (in either academic or nonacademic matters), after careful consideration and full review, is judged to be contrary to the standards and regulations of the UC and the host university.

Study center directors are available to students and are responsible for all aspects of student welfare and conduct.

Application

Applications for 2010–2011 will be available beginning September 2009. Students are encouraged to consult counselors in the International Education Center early to avoid disqualification through a missed deadline. The center is located in 1669 Statistics/Computer Bldg., or call (951) 827-4113. Program details are available at international-center.ucr.edu.

Electrical Engineering

Subject abbreviation: EE
The Marlan and Rosemary Bourns
College of Engineering

Roger Lake, Ph.D., Chair
Department Office,
343 Engineering Building Unit 2
(951) 827-2484; www.ee.ucr.edu

Professors

Alexander Balandin, Ph.D.
Matthew J. Barth, Ph.D.
Gerardo Beni, Ph.D.
Bir Bhanu, Ph.D.
Jie Chen, Ph.D.
Ilya Dumer, Ph.D.
Jay A. Farrell, Ph.D.
Susan Hackwood, Ph.D.
Yingbo Hua, Ph.D.
Sakhrat Khizroev, Ph.D.
Alexander Korotkov, Ph.D.
Roger Lake, Ph.D.
Mihri Ozkan, Ph.D.
Albert Wang, Ph.D.
Zhengyuan "Daniel" Xu, Ph.D.

Associate Professors

Ping Liang, Ph.D.
Jianlin Liu, Ph.D.
Xiang-Dong "Sheldon" Tan, Ph.D.
Ertem Tuncel, Ph.D.

Assistant Professors

Afshin Abdollahi, Ph.D.
Elaine D. Haberer, Ph.D.
Ilya Lyubomirsky, Ph.D.
Anastasios I. Mourikis, Ph.D.
Amit Roy Chowdhury, Ph.D.

**

Adjunct Professors

Bahram Parvin, Ph.D.
Hossny El-Sherief, Ph.D.

Cooperating Faculty

Guillermo Aguilar, Ph.D. (Mechanical Engineering)
Ludwig Bartels, Ph.D. (Chemistry)
Laxmi Bhuyan, Ph.D. (Computer Science and Engineering)
Paulo C. Chagas, Ph.D. (Music)
Michalis Faloutsos, Ph.D. (Computer Science and Engineering)
Dimitrios Gunopulos, Ph.D. (Computer Science and Engineering)
Robert Haddon, Ph.D. (Chemistry/Chemical and Environmental Engineering)
Qing Jiang, Ph.D. (Mechanical Engineering)
Tao Jiang, Ph.D. *President's Chair* (Computer Science and Engineering)
Srikanth Krishnamurthy, Ph.D. (Computer Science and Engineering)
Keh-Shin Lii, Ph.D. (Statistics)
Mart Molle, Ph.D. (Computer Science and Engineering)
Walid Najjar, Ph.D. (Computer Science and Engineering)
Cengiz Ozkan, Ph.D. (Mechanical Engineering)
Thomas Stahovich, Ph.D. (Mechanical Engineering)
Frank Vahid, Ph.D. (Computer Science and Engineering)
Sundararajan Venkatadriagram (Mechanical Engineering)
Junlan Wang, Ph.D. (Mechanical Engineering)

Affiliated Emeritus

J. Keith Oddson, Ph.D. (Mathematics)

Major

The Department of Electrical Engineering offers B.S., M.S., and Ph.D. degrees in Electrical Engineering.

The Electrical Engineering program objectives are to produce graduates able to:

- develop and pursue successful careers in electrical engineering
- apply electrical engineering knowledge and skills to further careers in a broad range of professional occupations
- conduct successful graduate studies and research at major research universities
- demonstrate innovation and creativity and pursue lifelong learning in solving engineering problems
- work effectively in a team environment, communicate well, attain professional growth, and provide leadership in engineering
- exercise professional responsibility and sensitivity to a broad range of social concerns, such as ethical, environmental, economic, regulatory, and global issues

All undergraduates in the College of Engineering must see an advisor at least annually. Visit student.engr.ucr.edu for details.