290. Seminar (1) Seminar—1 hour. Prerequisite: graduate standing at \( \text{UCD}. \) Seminar is presented by invited speakers; students or faculty on selected topics in horticulture. (S/U grading only.)—III. (III.)

298. Group Study (1-5)

Human and Community Development

See Human Ecology, on page 342.

Human Anatomy

See Courses in Cell Biology and Human Anatomy (CHA), on page 401.

Human Development

(College of Agricultural and Environmental Sciences)

Faculty
Jay Belsky, Ph.D., Distinguished Professor
Zhao Chen, Ph.D., Professor
Katherine Conger, Ph.D., Professor
Rand Conger, Ph.D., Distinguished Professor
Amanda Gayer, Ph.D., Associate Professor
Leah Hibbel, Ph.D., Assistant Professor
Siwei Liu, Ph.D., Assistant Professor
Lisa Miller, Ph.D., Associate Professor
Adrienne Nishina, Ph.D., Associate Professor
Beth A. Ober, Ph.D., Professor

Emeriti Faculty
Keith Barton, Ph.D., Professor Emeritus
Brenda Bryant, Ph.D., Professor Emeritus
Rosemarie Kraft, Ph.D., Lecturer SCE, Emerita
Lawrence V. Harper, Ph.D., Professor Emeritus
Richard Ponzio, Ph.D., Extension Specialist Emeritus
Emmy E. Werner, Ph.D., Extension Specialist Emerita

Affiliated Faculty
Jennifer Gonzales, Child Development Demonstration Lecturer
Julia Luckenbill, Child Development Demonstration Lecturer
Lenna Ontai Ph.D., Associate Specialist in Cooperative Extension
Martin Smith, Ph.D., Associate Specialist in Cooperative Extension
Kati Trzesniewski, Ph.D., Associate Specialist in Cooperative Extension
Kelly Twibell, Child Development Demonstration Lecturer, Continuing

The Major Program

Human development explores the developmental process in humans throughout the life cycle. Biological, cognitive, and personality/sociocultural aspects of development are studied.

The Program. Human development majors complete a group of preparatory courses in anthropological, general biology, genetics, history, philosophy, physiology, psychology, and statistics. Upper division students can design their programs in consultation with a faculty member to emphasize a particular interest. For instance, students can study the cognitive, social, and biological aspects of human development while emphasizing child or adult development.

Internships and Career Alternatives. At least one practicum course is required. A second practicum or supervised internship can be used to fulfill the restricted elective requirement for the major. In addition, students can intern in schools, early childhood education or senior centers, hospitals, rehabilitation centers, probation offices, group foster homes, mental health clinics, or as tutors for handicapped or bilingual students. Human development graduates fill a wide variety of positions in preschools, elementary and special educational settings, programs designed for parents, families, and the elderly, as well as governmental jobs related to social services for people of all ages. Students who emphasize biological aspects of human development can apply to medical school or pursue training for positions in the health sciences. Human development prepares students to pursue advanced degrees in behavioral and social sciences, education, social work, family law, or health sciences.

Preparatory Requirements. UC Davis students who wish to change their major to Human Development must complete the following courses with a combined grade point average of at least 2.500. All of the following courses must be taken for a letter grade:

- Psychology 1
- Statistics 10 or 13 or Psychology 41 or Sociology 44A and 46B
- One course from: Anthropology 1, 2 or 15
- One course from: Biological Sciences 2A, 10, 10V/Messenio 01, Microbiology 10, Molecular Cellular Biology 10, or Neurobiology, Physiology, and Behavior 10, 12 or 101

B.S. Major Requirements:

Preparatory Subject Matter.......................... 38-47
Two courses from: Anthropology 1, 2, or 15 ....................................................... 8-9
One course from: Biological Sciences 2A, 10, 10V, Microbiology 10, or Neurobiology, Physiology, and Behavior 12 .......................... 3-5
One course from: Molecular and Cellular Biology 10 or Biological Sciences 101 .......................... 4
One course from: History 17A, 17B, 72A, 72B, or Political Science 1 .......................................... 4
Two courses from: Philosophy 5, 30, 31, 32, or 38 ...................................... 8
One course from: Neurobiology, Physiology, and Behavior 101, 101, or Psychology 101 .................................................. 3-5
Psychology 1 ........................................................................ 8
One course from: Psychology 41 or Sociology 46A and 46B, or Statistics 10 or 13 .................................................. 8-13

Depth Subject Matter .................................. 50-55
Life Span. Human Development 100A, 100B, 100C .................................................. 12
Research Methods. Human Development 120 .................................................. 4
Biological Processes: one course from: Biological Sciences 101, Human Development 117, Nutrition 111AV, or Psychology 121 .................................................. 4
Social-Cultural Processes: one course from: Human Development 102, 110, 130, or 160 .................................................. 4
Cognitive Processes: one course from: Human Development 101, 103, 122, 161, or 163 .................................................. 4
Practicum: one course from: Human Development 140-140L, or 141 or 142 or 143 .................................................. 4-6
Restricted Electives.......................... 19-20
Five additional upper division courses chosen from among Human Development Courses or from a list of restricted electives in consultation with faculty adviser. May include only one practicum course.

At least one of the courses from the Depth Subject groups or Restricted Electives listed above must focus on childhood/adolescence (101, 102, 103, 110, 130, 132) and one on adulthood/aging (117, 143, 160, 161, 163).

English Composition Requirement .......... 4
In addition to the College English Composition requirements, choose one from University Writing Program 101, 102A, 102B, 102C, 102D, 102E, 102F, 102G, 102H, 104A, 104B, 104C, 104D, 104E, or 104F.

Total Units for the Major................. 92-106

At least one of Biological Sciences 101 cannot be used to satisfy both the Preparatory Subject Matter and the Depth Subject Matter Requirements.

Major Adviser. Lisa Miller

Minor Program Requirements:

The Department of Human and Community Development offers two minors.

Human Development Minors

Human Development 100A and 100B ....... 8
Human Development 100C or 110 ........... 4
Two courses from: Human Development 101, 102, 103, 130, 132, 161 or 163 ...... 8

Minor Adviser. L. Miller, B. Ober

UNITs

Aging and Adult Development ......... 18-20
Three of following courses.

- Human Development 100C, 117, 143, 160, or 161 .......................... 12
- Two courses from the following: Human Development 110; Exercise Biology 117, Psychology 121, 123, 126, 130, or 155 ........................................ 6-8

Minor Adviser. K. Conger

Graduate Study. Graduate study is available through a Master of Science degree in child development, and a Ph.D. degree in human development. See also Graduate Studies, on page 111.

Courses in Human Development (HDE)

Questions pertaining to the following courses should be directed to the instructor or to the Human and Community Development Advising Center in 1303 Hart Hall 530-752-2244.

Lower Division

12. Human Sexuality (3)
Lecture—3 hours. Vocabulary, structure/function of reproductive system; sexual response; pre-natal development; pregnancy and childbirth; development of sexuality; rape and sexual assault; birth control; sexually transmitted diseases; homosexuality; establishing/maintaining intimacy; sexual dysfunctions; communication; enhancing sexual interaction, cultural differences in attitudes towards sexuality. GE credit: SocSci, Div | ACCH, DD, SS, — I, II, III.

92. Internship (1-12)
Internship—3-36 hours. Prerequisite: field work experience or at least one course (e.g., course 100A, 100B, 100C or 140) and work-study assignment; consent of instructor. Supervised internship, off campus and on campus, in community and institutional setting. May be repeated for credit for a total of 12 units or if involves progressively greater (supervised) participation in program delivery or assessment. (P/NP grading only.)—I, II, III, (I, II, III)

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

99. Special Study for Undergraduate (1-5)
(P/NP grading only)
101. Cognitive Development (4)
Lecture—3 hours; term paper. Prerequisite: course 100A or Psychology 140. Pass One restricted to Human Development or Psychology majors. Topics focus on evidence, and debates in the field of cognitive development, such as nature/nurture, constraints on learning, and the role of plasticity. Topics include attention, memory, concepts about the physical and social world, and language. (Same course as Psychology 141.) GE credit: Wrt | WE.—I, II, III. (II, III, III) Chen, Gibbs, Goodman, Graf Estes, Lagaitula, Rivera

102. Social and Personality Development (4)
Lecture—3 hours; term paper. Prerequisite: course 100A or Psychology 140. Pass One open to Human Development or Psychology majors. Social and personality development of children, infancy through adolescence. Topics include the development of personality, achievement motivation, self-understanding, sex-role identity, and antisocial behavior. Emphasis on the interface between biological and social factors. (Same course as Psychology 142.) GE credit: SocSci, Wrt | SS, WE.—I, II, III. (II, III, III) Belsky, Gibbs, Hastings, Thompson

103. Cross-Cultural Study of Children (4)
Lecture—3 hours; term paper. Prerequisite: course 100A or consent of instructor. Cross-cultural studies of children in developing countries and among minority groups in the U.S. GE credit: SocSci, Div | AGCH, DD, SS, WC.—I, II, III. (I, II, III)

110. Contemporary American Family (4)
Lecture—4 hours. Prerequisite: course 100A or consent of instructor. Factors currently influencing American families including changing economic conditions, changing sex roles, divorce, and parenthood; theories and research on family interaction.—II. (I) K. Conger

117. Longevity (4)
Lecture—3 hours; term paper. Prerequisite: upper division standing or consent of instructor. Nature, origin, determinants, and limits of longevity with particular reference to human aging; emphasis on implications of findings from non-human model systems including natural history, ecology and evolution of life span; description of basic demographic techniques including stable methods. (Same course as Entomology 117.) GE credit: SciEng, Wrt | SE, SL, WE.—I, II. (II) Carey

120. Research Methods in Human Development (4)
Lecture—3 hours; laboratory—3 hours. Prerequisite: Statistics 13 or Education 114 or Psychology 41 or Sociology 46A & B. Scientific process, research design, and experimental controls; APA manuscript style and scientific writing; statistical analysis and interpretation of results. Laboratory exercises to collect data, analyze and interpret results, and write scientific papers. GE credit: SocSci, Wrt | SS, WE.—I, III. (III) Nguyen, Liu

121. Psychological Assessment (4)
Lecture—4 hours. Prerequisite: courses 100A-100B; elementary statistics. Current issues and methodology related to the process of psychological assessment with children.

130. Emotionally Disturbed Children (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: courses 100A and 100B or consent of instructor. Discussion of psychological and neuropsychological subtypes of emotional disturbances, and learning difficulties in children.

132. Individual Differences in Cognition (4)
Lecture—4 hours. Individual differences in cognition, including learning disabilities and giftedness. Education implications and neuropsychological subtypes of emotional disturbances in intervention. May be repeated for credit. (P/NP grading only.)—I, II, III. (I, II, III) Chen

140A. Laboratory in Early Childhood (3-5)
Laboratory—6-15 hours; laboratory/discussion—3 hours. Prerequisite: course 140, must be taken concurrently for first 3 units of credit; students must contact the Center for Child and Family Studies to enroll. Application of theories of learning and development to interaction with infants, toddlers, and preschoolers at Early Childhood Education Center located at 244 First Street, Davis, CA.—I, II, III. (I, II, III) Chen

141. Field Study With Children and Adolescents (4-6)
Lecture—2 hours, fieldwork—6-12 hours. Prerequisite: course 100A or 100B; consent of instructor. Study of children’s affective, cognitive and social development with an emphasis on school/school environments, hospitals and foster group homes. May be repeated for credit for a total of 12 units.

142. Field Study with Emotionally Distressed Children and Adolescents (4-6)
Discussion—1.5 hours; fieldwork—6-12 hours. Prerequisite: course 130 (may be taken concurrently); consent of instructor. Field study with children who are identified as emotionally distressed, including those with internalizing and externalizing behavioral problems. May be repeated for credit for a total of 12 units following consultation with and consent of instructor.

143. Field Studies of the Elderly (4-6)
Discussion—2 hours; field work—6-12 hours. Prerequisite: course 100C or 160 may be taken concurrently. Apply theory and research on aging development and aging, work with older adults in a variety of settings, and develop skills relevant to that application. Develop a small research project.—I, Miller

160. Social Aspects of Aging (4)
Lecture—4 hours. Prerequisite: course 100C or Psychology 115. How the social context affects adult development and aging. Emphasis on demography, social policy, culture, and adaptation. Oral histories as class projects. Offered in alternate years. GE credit: Div.—I.

161. Applied Cognition and Aging (4)
Lecture/discussion—4 hours. Prerequisite: introductory social sciences course, Human Development, Psychology 1, Educational Psychology, or consent of instructor. Principles from cognition and aging and applies these to real-world concerns in areas including education, technology, job performance, and health. Considers physical and social changes in later life that impact functioning. Offered in alternate years. GE credit: SocSci, Wrt | SS, WE.—I, II. (I) Miller

163. Cognitive Neuropsychology in Adulthood and Aging (4)
Lecture/discussion—4 hours. Prerequisite: Psychology 1; course 100C recommended. Theories, methods, and findings concerning the relationship between cognitive processes and brain functioning. Readings, lectures, and in-class discussions cover research on normal younger and older adults, neuro-psychological case studies, and selected patient groups (e.g., amnesia, schizophrenia, Alzheimer’s disease).—I. (III) Ober

190C. Introductory Research Conference (1)
Discussion—1 hour. Prerequisite: involvement in ongoing research. Introduction to the research process with undergraduates who involve themselves in a research project. Research papers are reviewed and aspects of project proposals developed out of class and presented and evaluated. May be repeated for credit. (P/NP grading only.)—II, III. (I, III, III)

192. Internship (1-12)
Internship—3-36 hours. Prerequisite: upper division standing and consent of instructor. Supervised internships off and on campus, in professional settings. (P/NP grading only.)

198. Directed Group Study (1-5)
(P/NP grading only.)

199. Special Study for Advanced Undergraduates (1-5)
(P/NP grading only.)

Graduate

200A. Early Development (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: graduate standing, basic biology or physiology; one upper division course in psychology or a related field; one upper division or graduate course in developmental psychology (may be taken concurrently). Theory and research on biological, cognitive, social, and cultural aspects of development from conception to the age of five years.—I. Chen, Hibel

200B. Middle Childhood and Adolescence (4)
Lecture—3 hours; discussion—1 hour. Prerequisite: graduate standing, basic biology or physiology, and at least two upper division or graduate-level courses in psychology or related fields. Theory and research on biological, cognitive, social, and cultural aspects of development from age five years until late adolescence.—II. Nishina, Guyer

200C. Development in Adulthood (4)
Lecture/discussion—4 hours. Prerequisite: courses 200A and 200B. Theory and research focusing on social, personality, cognitive, and biological development from early to late adulthood. Emphasis is on theory development and continuity and change.—III. Ober, Miller

203. Adolescent Behavioral and Emotional Development (4)
Lecture/discussion—4 hours. Prerequisite: course 200B. Analysis of recent theories, research methods, and major findings on adolescent behavioral and emotional development, including contextual and genetic influences on adolescence, perinatal transitions, and social/family contexts and processes. Emphasis on multi-level mechanisms underlying adolescent behavioral and emotional development. Offered in alternate years.

204. Developmental Neuroscience and Adolescent Psychopathology (4)
Lecture—4 hours. Prerequisite: graduate standing in Human Development, Psychology, Education, Neuroscience or consent of instructor. Introduction to human developmental neuroscience. Understanding of psychology and its characterization as a time of risky and unhealthy behavior and vulnerability to onset of mental disorder as well as issues around plasticity of the adolescent brain and prevention/intervention. Offered in alternate years.—II. (II) Guyer
205. Path Analysis, Factor Analysis, and Structural Equation Modeling (4)
Lecture—4 hours. Prerequisite: Psychology 248 or equivalent graduate courses in statistics or permission of the instructor. Familiarity with multiple regression and the basics of matrix algebra. Graduate standing in Human Development, Psychology, Sociology, Education, or a related social science, or permission of the instructor. Introduction of basic concepts, principles, and applications of structural equation modeling including path analysis, confirmatory factor analysis, multiple-group modeling, and latent growth curve modeling. Offered in alternate years.

207. Topics in Applied Cognitive Aging (4)
Lecture/discussion—2 hours. Prerequisite: graduate standing in Human Development Graduate Group, Psychology, Education, or a related social science, or consent of the instructor. Applies principles from cognitive aging to real-world concerns in areas such as education, technology, job performance, and health. Examines how physical and social changes occurring in later life impact functioning. Offered in alternate years.—I. Miller

210. Theories of Behavioral Development (3)
Lecture—2 hours; discussion—1 hour. Prerequisite: graduate standing in behavioral sciences. Consideration of enduring issues in theories of behavioral development; adequacy of major theoretical schools (e.g., social learning, Piagetian) as scientific theories. Offered in alternate years.

211. Physiological Correlates of Behavioral Development (4)
Seminar—5 hours. Prerequisite: consent of instructor. An overview of mechanisms of organismic development and the implications of developmental biology for the analysis of behavioral ontogeny; consideration of parallels between processes of organismic development and behavioral development in children and infra-human mammals. Offered in alternate years.—III.

220. Research Methods in Human Growth and Development (4)
Lecture—4 hours. Prerequisite: Statistics 13 or the equivalent and at least two upper division courses in Human Biology or Developmental Psychology. Overview of qualitative and quantitative approaches to empirical inquiry in the social sciences, with a focus on theory and research methods in biological growth and cognitive and social/emotional development from prenatal period to death.—III. (II.) Liu

232. Cognition (3)
Lecture/discussion—3 hours. Prerequisite: course 200C. The manner in which cognitive processes are affected by aging as well as an understanding of the changes in the central nervous system occurring with aging. Offered in alternate years.—I. Chen

234. Children's Learning and Thinking (3)
Seminar—3 hours. Prerequisite: course 200A or Psychology 212 recommended. Analysis of theories, research methods, and major findings of children's higher-order cognition, including origins of knowledge, development of problem-solving skills, reasoning strategies, and scientific concepts, with an emphasis on the underlying mechanism involved in children's thinking and learning processes. Offered in alternate years.—Chen

238. The Context of Individual Development (3)
Lecture/discussion—3 hours. Prerequisite: graduate standing in Human Development, Child Development, Education, Psychology, Anthropology, Sociology, or consent of instructor. Analysis of human development within the context of daily life. Contextualizing theories and methods of developmental psychology will be distinguished from contextual theories and methods. Developmental psychology models will be distinguished from child psychology models. Offered in alternate years.

239. Developmental Trajectories in Typical and Atypical Children; Birth to Five (4)
Lecture/discussion—3 hours; term paper. Prerequisite: graduate standing in Human Development, Psychology, Sociology, a related social science, or permission of the instructor. Discuss theories of development in typical and atypical children from birth to five from a sociocultural perspective including parent-child interaction, peer interactions, cultural contexts of learning, as well as theoretical and empirical issues for understanding continuities and discontinuities in development. Offered in alternate years.—III.

240. Peer Relationships During Adolescence (4)
Lecture/discussion—4 hours. Prerequisite: graduate standing in Human Development, Psychology, Education, or consent of instructor. Course examines the role of peer relationships in adolescent development including forms and functions at the individual, dyadic and group levels. Ethnicity and cross-cultural research with particular emphasis on the nature and development of sibling, romantic, and parent-child relationships across the lifespan. Emphasis on identifying theoretical and family processes examined in ethnic/cultural contexts. Implications for individual development will be addressed.—III. K. Conger

252. Family Research, Programs and Policy (4)
Seminar—3 hours; term paper. Prerequisite: graduate standing in Human Development, Psychology, Sociology, related social sciences, or consent of instructor. Course examines the competing interests of research, policy, and service on current issues of family functioning and individual well-being. The course considers communication barriers between researchers, practitioners, and policy makers. Offered in alternate years.—(III.) K. Conger

290. Seminar (3)
Seminar—3 hours. Discussion and evaluation of theories, research, and issues in human development. Different topics each quarter.—I, II, III. (II, III, III.)

290C. Research Conference (1)
Discussion—1 hour. Prerequisite: graduate standing and consent of instructor. Supervising instructors lead research discussions with their graduate students. Research proposals are presented and evaluated. May be repeated for credit. (S/U grading only)—I, II, III, (II, III, III.)

291. Research Issues in Human Development (4)
Seminar—4 hours. Prerequisite: graduate standing in the Behavioral Sciences. In-depth presentations of research issues in particular areas of behavioral development.—I, II, III. R. Conger

292. Graduate Internship (1-12)
Internship—3-36 hours. Prerequisite: consent of faculty (internship sponsor) and satisfactory completion of placement/related course work, for example: Education 213, 216, course 222, 242; Law 272, 273. Individually designed supervised internship, off campus, in community or institutional setting. Developed with advice of faculty mentor. May be repeated for credit up to 12 units if justified skill acquisition and promise of informing evaluation research. (S/U grading only)—I, II, III, (II, III, III.)

298. Group Study (1-5)

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

Professional

396. Teaching Assistant Training Practicum (1-4)
Prerequisite: graduate standing. May be repeated for credit. (S/U grading only)—I, II, III. (I, II, III.)

Human Development (A Graduate Group)

Katherine J. Conger, Ph.D., Group Chairperson
Group Office. 1315 Hart Hall
530-754-4109
http://humandevelopment.ucdavis.edu

Faculty

Len Abbeduto, Ph.D., Professor (Psychiatry and Behavioral Sciences and Director, M.I.N.D. Institute)
Jay Belsky, Ph.D., Distinguished Professor (Human Ecology)
Zhe Chen, Ph.D., Professor (Human Ecology)
Katherine J. Conger, Ph.D., Professor (Human Ecology)
Rand Conger, Ph.D., Distinguished Professor (Human Ecology)
Nancy Ebstein, Ph.D., Assistant Researcher (Human Ecology)
Emilio Ferrer, Ph.D., Professor (Psychology)
Lorena Garcia, M.P.H., Dr.P.H., Assistant Professor (Public Health Sciences)
Kevin Gee, Ph.D., Assistant Professor (Education)
Beth Goodlin, Ph.D., Associate Professor (Psychiatry, M.I.N.D. Institute)
Gail Goodman, Ph.D., Professor (Psychology)
Katharine Graf Estes, Ph.D., Assistant Professor (Psychology)
Amanda Gryer, Ph.D., Associate Professor (Human Ecology, Center for Mind and Brain)
Randi Hagerman, M.D., Professor (M.I.N.D. Institute)
Robert L. Hansen, M.D., Professor (Pediatrics)
Lawrence V. Harper, Ph.D., Professor (Human Ecology)
Paul Hastings, Ph.D., Professor (Psychology)
David Hassl, Ph.D., Associate Clinical Professor (Psychiatry, M.I.N.D. Institute)
Leah Hibel, Ph.D., Assistant Professor (Human Ecology)
Ladson Hinton, M.D., Professor (Psychiatry and Behavioral Sciences)
Suad Joseph, Ph.D., Professor (Anthropology)
Penelope Knapp, M.D., Professor (Psychiatry, M.I.N.D. Institute)
Siwei Liu, Ph.D., Assistant Professor (Human Ecology)
McDonald, Craig, M.D., Professor (Physical Medicine and Rehabilitation)
Lisa Miller, Ph.D., Associate Professor (Human Ecology)
Peter Mundy, Ph.D., Professor (Education, M.I.N.D. Institute)
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