



SACRAMENTO
STATE

Course Change Proposal Form A

Academic Group (College): College of Education	Academic Organization (Department): Child Development	Date: November 16, 2006
Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>	Department Chair: Karen Horobin	Submitted by: Karen Davis O'Hara
Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	For Catalog Copy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CCE: Yes <input type="checkbox"/> No <input type="checkbox"/>	Semester Effective: Summer 2007 Fall <input type="checkbox"/> Spring <input type="checkbox"/>, 20__

This course replaces experimental course Subject Area (prefix) and Catalog Number (course number):	
This Catalog Number (course number) is being replaced:	

Change from:

Subject Area (prefix) & Catalog No. (course no.):	Title:	Units:
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Change to:

Subject Area (prefix) & Catalog No. (course no.): CHDV 143	Title: Mind and Brain in Developmental Context	Units: 3
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JUSTIFICATION:

The field of child development is changing rapidly, and theories of growth and development are increasingly involving physiological mechanisms. For example, theories of cognitive, emotional, moral, family, and cross-cultural development are significantly elaborated by psychobiological studies. However, few courses on campus give a comprehensive examination of the many ways in which such physiological mechanisms affect development, and vice versa. One of the main objectives of this course will be to dispel the myth that biology is deterministic, and to illustrate without question the multi-directional way in which physiology, genetics, and environment shape development over the lifespan.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See <http://www.csus.edu/acaf/univmanual/crspsl.htm> - Guidelines for Catalog Course Description)

Investigation of the biological processes underlying child development, from conception through adolescence. Emphasis will be on the genetic, neurological, and endocrine processes related to cognition, social, and emotional development. Students will explore the bidirectional nature of psychobiological processes, with specific emphasis on the psychobiological mechanisms underlying the transaction between cultural, educational, and social-emotional related to educational, and mental and physical health functioning.

Note:

Prerequisite: CHDV 30/35, Introductory Biology

Corequisite:

CAN (California Articulation Number):

Graded: Letter Credit/No Credit

Instructor Approval Required? Yes No

Course Classification (e.g., lecture, lab, seminar, discussion):

Title for SIS+/CMS (not more than 30 characters)
Context of Mind and Brain

Cross Listed?
Yes No

If yes, do they meet together and fulfill the same requirement, and what is the other course.

How Many Times Can This Course be Taken for Credit? 1

Can the course be taken for Credit more than once during the same term? Yes No

FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: “Students will be able to: 1), 2), etc.” See the example at <http://www.csus.edu/acaf/example.htm>

Students will be able to:

- 1) understand the concept of “transaction,” between organism and environment, and that development is not pre-determined by biology
- 2) learn the major components of the central nervous system (cortical, sub-cortical, cranial nerves, and basic endocrine system) and how genetics, behavior and developmental context shape and are shaped by its development
- 3) examine the current literature on psychobiological functioning related to concepts of intelligence, learning, emotions, social functioning (e.g. aggression, social withdrawal), and physical and mental health
- 4) Learn the terminology used to understand primary research on the psychobiological contexts in human development

**Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

Learning strategies will include a) reaction papers to readings, b) examinations, and c) term paper

For whom is this course being developed?

Majors in the Dept ___ Majors of other Depts ___ Minors in the Dept ___ General Education X Other ___

Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes ___ No X

If yes, identify program(s):

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No X

If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). Psychology, Nursing, Biology

The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures:

Date

Department Chair:	
College Dean or Associate Dean:	
CPSP (for school personnel courses ONLY)	
Associate Vice President and Dean for Academic Programs	

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean's office to send original after approval to Academic Affairs, at mail zip 6016. An electronic copy must also be sent.

Mind and Brain in Developmental Context

Reading list

- Baron-Cohen, S., & Belmonte, M. K. (2005). Autism: A window onto the development of the social and the analytical brain. *Annual Review of Neuroscience*, 28, 109-126.
- Bell, M. A., & Fox, N. A. (1997). Individual differences in object permanence performance at 8 months: Locomotor experience and brain electrical activity. *Developmental Psychobiology*, 31(4), 287.
- Bell, M. A., & Richards, J. E. (1998). Frontal lobe function during infancy: Implications for the development of cognition and attention. In *Cognitive neuroscience of attention: A developmental perspective*. (pp. 287): Lawrence Erlbaum.
- Benes, F. M. (1994). Development of the corticolimbic system. In G. Dawson & K. W. Fischer (Eds.), *Human behavior and the developing brain*. (pp. 176): Guilford Press.
- Biringen, Z., & Emde, R. N. (1995). Affective reorganization in the infant, the mother, and the dyad: The role of upright locomotion. *Child Development*, 66, 499.
- Boliek, C. A., Obrzut, J. E. (1995). Perceptual laterality in developmental learning disabilities. In R.J. Davidson, and K. Hugdahl (Eds.) *Brain asymmetry* (pp. 637): The MIT Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (1999). *How people learn: Brain, mind, experience, and school*. Washington DC: National Academy Press.
- Bruer, J. T. (1997). Education and the brain: A bridge too far. *Educational Researcher*, 26(8), 4-16.
- Bruer, J. T. (2001). A critical and sensitive period primer. In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 3). Baltimore, MD: Paul H. Brookes.
- Bruer, J. T., & Greenough, W. T. (2001). The subtle science of how experience affects the brain. In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 209). Baltimore, MD: Paul H. Brookes Publishing Co.
- Cacioppo, J. T. (2004). Feelings and emotions: Roles for electrophysiological markers. *Biological Psychology*, 67(1-2), 235.
- Davis, E. P., Bruce, J., & Gunnar, M. R. (2002). The anterior attention network: Associations with temperament and neuroendocrine activity in 6-year-old children. *Developmental Psychobiology*, 40(1), 43.
- Diamond, A. (2000). Close interrelation of motor development and cognitive development and of the cerebellum and prefrontal cortex. *Child Development*, 71(1), 44.
- Diamond, M., & Hopson, J. (1998). *Magic trees of the mind: How to nurture your child's intelligence, creativity, and healthy emotions from birth through adolescence*: Plume/Penguin Books.
- Farran, D. C. (2001). Critical periods and early intervention. In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 233). Baltimore, MD: Paul H. Brookes
- Fischer, K. W., Rose, S. P., Thatcher, R. W., & Lyon, G. R. (1996). Dynamic growth cycles of brain and cognitive development In *Developmental neuroimaging: Mapping the development of brain and behavior*. (pp. 263): Academic Press, Inc.
- Fowles, D. C., Kochanska, G., & Murray, K. (2000). Electrodermal activity and temperament in preschool children. *Psychophysiology*, 37(6), 777.
- Granger, D. A., & Kivlighan, K. T. (2003). Integrating biological, behavioral, and social levels of analysis in early child development: Progress, problems, and prospects. *Child Development*, 74(4), 1058.
- Habib, M. (2000). The neurological basis of developmental dyslexia: An overview and working hypothesis. *Brain*, 123(12), 2373.
- Insel, T. R., & Fernald, R. D. (2004). How the brain processes social information: Searching for the social brain. *Annual Review of Neuroscience*, 27, 697.
- Jones, N. A., Field, T., Fox, N. A., Davalos, M., Malphurs, J., Carraway, K., et al. (1997). Infants of intrusive and withdrawn mothers. *Infant Behavior & Development*, 20(2), 175.
- Lichtman, J. W. (2001). Developmental neurobiology overview: Synapses, circuits, and plasticity. In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 27). Baltimore, MD: Paul H. Brookes Publishing Co.
- Nelson, C. A., & Dukette, D. (1998). A cognitive neuroscience perspective on the relation between attention and memory development. In J. E. Richards (Ed.), *Cognitive neuroscience of attention: A developmental perspective*. (pp. 327): Lawrence Erlbaum.
- Neville, H. J., & Bruer, J. T. (2001). Language processing: How experience affects brain organization. In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 151). Baltimore, MD: Paul H. Brookes.
- Segalowitz, S. J., & Davies, P. L. (2004). Charting the maturation of the frontal lobe: An electrophysiological strategy. *Brain & Cognition*, 55(1), 116.
- Simos, P. G., Breier, J. I., Fletcher, J. M., Foorman, B. R., Mouzaki, A., & Papanicolaou, A. C. (2001). Age-related changes in regional brain activation during phonological decoding and printed word recognition. *Developmental Neuropsychology*, 19(2), 191.

- Spangler, G., & Grossmann, K. E. (1993). Biobehavioral organization in securely and insecurely attached infants. *Child Development, 64*(5), 1439.
- Stansbury, K., & Gunnar, M. R. (1994). Adrenocortical activity and emotion regulation. *Monographs of the Society for Research in Child Development, 59*(2), 108.
- Thompson, R. A. (2001). Sensitive periods in attachment? In D. B. J. Bailey & J. T. Bruer (Eds.), *Critical thinking about critical periods*. (pp. 83). Baltimore, MD: Paul H. Brookes.
- Wadhwa, P. D. (2005). Psychoneuroendocrine processes in human pregnancy influence fetal development and health. *Psychoneuroendocrinology, 30* (8), 724.
- Werker, J. F., & Tees, R. C. (2005). Speech perception as a window for understanding plasticity and commitment in language systems of the brain. *Developmental Psychobiology, 46*(3), 233-251.
- Wolfe, C. D., & Bell, M. A. (2004). Working memory and inhibitory control in early childhood: Contributions from physiology, temperament, and language. *Developmental Psychobiology, 44*(1), 68.