

Strategic initiative: #10a New degree programs in areas of demand that track with university strengths and strategic initiatives.
#11a Total graduate student enrollment
Stretch goal: 5,000 Graduate Enrollment

MATTERS FOR ACTION:

New Degree Program: Ph.D. Degree Program in the Department of Human Development and Family Studies - College of Applied Human Sciences

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the request from the College of Applied Human Sciences – Department of Human Development and Family Studies to create a new Ph.D. Degree Program in Applied Developmental Science to be effective Fall Semester 2009.

EXPLANATION:

Presented by Tony Frank, Provost and Senior Executive Vice President.

According to the proposal, Applied Developmental Science is an established synthesis of lifespan human development and prevention science, with a growing demand for Ph.D. trained specialists in academia and applied settings. The proposed Ph.D. curriculum builds on the existing Master of Science program in Human Development and Family Studies, and supports the department's doctoral proposal.

Board of Governors of the
Colorado State University System
Meeting Date: October 1, 2008
Action Item

**Colorado State University
College of Applied Human Sciences
Department of Human Development and Family Studies (HDFS)
Proposed Ph.D. in Applied Developmental Science**

1. Overview of Proposed Program

Name: Applied Developmental Science
Degree Type: Ph.D.
Department/School: Human Development and Family Studies
College of Applied Human Sciences
Colorado State University
Five-Year Expected Enrollment: 16-20 steady-state after 5th year

Proposed Degree, Rationale and Summary

This document summarizes the plan for the Department of Human Development and Family Studies' (HDFS) **Doctor of Philosophy (Ph.D.) degree in Applied Developmental Science** that has been approved by the CSU Faculty Council. The aim of the Ph.D. program is to prepare students in the basic and applied aspects of human development across the lifespan so that they can become independent researchers as well as integral members of teams and task forces that address social and societal problems from a multidisciplinary and integrative perspective. This program is designed to have a direct practical impact on social, economic, and quality of life issues of the people of the State of Colorado and the Nation.

Applied Developmental Science is grounded in science and a research-based understanding of the nature, the contextual influences, and the plasticity of human development across the lifespan. This understanding is applied to interventions, programs, and policies with the goal of promoting human well-being. Thus, Applied Developmental Science is a unique **integration of science, application, and practice**, and fits under the category of translational science. Knowledge generated by applied developmental scientists feeds back into basic research on lifelong human development and informs the theories and research agendas in a variety of basic and applied sciences. Knowledge generated by applied developmental scientists also informs strategic planning in the areas of public health and social policy, such as those related to families living in poverty; children with disabilities; effective parenting in the face of changing family structures; youth exposed to or engaged in violence, substance abuse, and high-risk behavior; optimizing the availability of human and social capital; and the "graying of society," to name a few.

Applied Developmental Science is a respected, recognizable, and growing sub-discipline of Human Development and Family Studies and is similar in focus to its sister in Psychology, Applied Developmental Psychology. The *Journal of Applied Developmental Science* is a testament to the peer-reviewed empirical science in this field. Owing to its relative newness, only 13 other programs exist in the U.S., with only 2 west of the Mississippi. No similar program exists in the state of Colorado. Thus, the proposed Ph.D. is poised to be on the cutting edge of

behavioral science, at the same time capitalizing on the strengths and traditions of a solid foundation in Human Development and Family Studies.

The Ph.D. in Applied Developmental Science utilizes existing and newly developed courses in HDFS and will provide students with internship placements in organizations that focus on applied developmental issues at various levels (e.g., applied research companies; school districts/departments of education; departments of human services; human service organizations; social policy and advocacy organizations; state and federal government, etc.). The combination of rigorous theoretical and empirical training, on one hand, and real-life experience at the organizational and applied level, on the other hand, represents a unique feature of the proposed degree program and will generate highly qualified graduates who can serve our society within and beyond the traditional academic realm.

The Ph.D. program in Applied Developmental Science builds in a logical way on the existing expertise in the Department of HDFS and positions the department and CSU prominently for national visibility. The Department believes that the presence of an Applied Developmental Science doctoral program at CSU will capitalize on the growing demand for experts in this area, given the relative rarity of such programs. Specifically:

- We will offer a more unique degree than the myriad of other HDFS programs that exist in the U.S. Only 13 other Applied Developmental Science programs exist, with only 2 west of the Mississippi.
- The program unites our department in that it is equally attractive to students who are interested in research or applied science degrees (typically the students who come through our Master's program in the Family and Developmental Studies track) *as well as* students interested in clinical science (students who come through the Marriage and Family Therapy track).
- The program will help to position us competitively for research funding and training grants that emphasize prevention and intervention science, which is rapidly emerging as the most significant application of behavioral science, and particularly of the study of human development.
- Finally, we can not achieve research excellence or a reputation for graduate education excellence without a Ph.D. program. The Ph.D. program is critical for attracting future students, attracting external funding, and supporting faculty research and graduate education in an apprentice/mentor paradigm.

The Department of HDFS believes this degree is consistent with the CSU mission and objectives because it will:

- Increase publications, research productivity, and extramural funding;
- Aid in faculty recruitment and retention;
- Enhance our undergraduate and master's programs by attracting and retaining excellent faculty and by involving those students in cutting-edge research, interventions, and social policy applications;
- Support HDFS in achieving our goals of being recognized as a CSU Program of Research and Scholarly Excellence and externally ranked as one of the strongest programs in the country;

- Increase CSU's visibility as a resource for solving problems that are important and meaningful to residents of Colorado, the United States, and the global community;
- Be self-sufficient after a relatively short ramp-up period; and
- Support the CSU mission of excellence in research, teaching, and outreach.

2. *Fit with Colorado State University's Role, Mission and Current Strategic Plan*

Because currently only 13 Ph.D. programs in Applied Developmental Science exist in the United States, establishing such a program at CSU is consistent with the vision for the Colorado State University System to be one of the premier systems of public higher education in the nation. Establishing a well-executed program in Applied Developmental Science will put CSU in a position to offer a program that represents the cutting edge of multidisciplinary work in the social and behavioral sciences, and will put the university in the forefront of a field that is increasing in demand. Moreover, the Ph.D. program in Applied Developmental Science is consistent with the system mission and the mission of CSU calling for excellence and for setting the standard for public research universities in teaching, research, service, and outreach for the benefit of the citizens of Colorado, the United States, and the world.

The Ph.D. program in Applied Developmental Science supports the following specific ***instructional and research goals*** of CSU's strategic plan:

- **Goal 10:** Refine existing and selectively create new graduate degree programs consistent with the institution's strengths and demands of society.
- **Goal 11:** Increase the number of graduate students on campus, including international students.
- **Goal 18:** Increase externally funded research.
- **Goal 20:** Grow the base of research faculty and graduate research assistants, commensurate with higher levels of external funding, goals for teaching excellence, and a global perspective in our educational programs.
- **Goal 23:** Encourage scholarship that addresses pressing social, political, economic and cultural issues, both domestic and international. A second thrust of our research emphasis will be to address global issues and challenges that are relevant to citizens and have important public policy consequences, especially for Colorado and the West. Scholarship that addresses the challenges facing minority populations and changing demographic patterns is particularly relevant.

The Ph.D. program in Applied Developmental Science is also consistent with the ***service and outreach mission*** of CSU. Because Applied Developmental Science emphasizes the translation of research into evidence-based practice, the proposed program will fulfill the service and outreach mission of CSU and the Department of HDFS through rigorous basic and applied research on human and family development that leads to knowledge about factors that affect the quality of life of individuals, families, and communities. Second, findings from such research will inform public policy and will affect individuals' and families' lives through adoption of best practices in the realm of public health and social policy. Promoting optimal human development is a basic concern in a world of globalization and rapid technological, social, cultural, and

demographic changes, and understanding the contextual influences that can hinder or facilitate optimal human development is fundamental to and consistent with the mission of CSU. Thus, establishing a program in Applied Developmental Science at CSU will allow the university to focus even more visibly, and capably, on issues that affect the well-being of the people of Colorado, the U.S., and the world.

3. Evidence of Need for the Program

Evidence shows that the regional and national needs for experts in Applied Developmental Science are growing and that this Ph.D. program would produce graduates who would be well trained to address a number of important social and societal problems. Specifically:

- Recent employment surveys are uniformly positive about the job prospects for new Ph.D.s in the social and behavioral sciences, including candidates with a Ph.D. in Applied Developmental Science and related specialties in HDFFS.
- A recent survey of 9 Ph.D. programs in Applied Developmental Science found an employment rate of 100%. This high employment rate is expected to remain stable for at least 15 years because of the large number of professionals who will be retiring from academia and the human services, and greater opportunities for Applied Developmental Science specialists outside of academia.
- Based on an extensive review of data from existing and successful Applied Developmental Science programs in the U.S., it is expected that about half of our Ph.D. graduates will seek academic and scientific positions, where employment is expected to grow by 28.4% within the next 8 years. This growth rate is much faster than average and second only to the social assistance and health care sector.
- The demand for research-trained professionals in applied areas such as program design and evaluation, social assistance, and health care is projected to grow faster and add more jobs than any other industry super sector, with increases of 31% expected due to an aging population and a consistently increasing active life expectancy.
- Employment prospects are especially good for professionals who work in health-related areas: The increased awareness of how students' mental health and behavioral problems affect learning, the impact of job stress and addictions on adults, and the rise in health care costs associated with unhealthy lifestyles has made effective prevention critical. Ph.D.s with an applied developmental training are well positioned to develop prevention programs for school districts, statewide health organizations, and health prevention programs initiated by private industry.

Evidence of need is also demonstrated internally. In the past, Ph.D. students who wished to be mentored by HDFFS faculty members and conduct research in labs based in HDFFS have been accommodated via entry into the Ph.D. programs in the Department of Psychology and the School of Education. In the Department of Psychology, these students have been admitted to the Ph.D. program in Applied Social Psychology, with an emphasis on lifespan development. In the School of Education, Ph.D. students have been admitted to the Ph.D. program in Interdisciplinary Studies. However, for most of these students, these were not ideal situations in that their degree did not reflect their career interest or goals, and having a degree not specifically related to their training has provided challenges for them in marketing themselves for jobs that fit with their goals. Second, and most critically, owing to new strategic directions in

Psychology, the Lifespan Track has been phased out (i.e., current students will finish but no new students are being accepted), thus curtailing options for doctoral studies in developmental behavioral science. Although the Interdisciplinary Studies program in the School of Education continues as an option for those students interested in careers related to Education, it has been and will continue to be a smaller partner for HDFS; again, it is our experience that students enroll in this program *because* there is not a Ph.D. offering in their home discipline.

Despite these challenges, HDFS is grateful for the opportunities provided by these alternative programs for our students in that they have allowed us to demonstrate a commitment to graduate education, and success in minting Ph.D.s. Since 2001, HDFS faculty members have successfully chaired 11 Ph.D. committees in these two programs. Currently, HDFS faculty members are the primary advisors for 11 Ph.D. students. Of these 22 students, 15 have received funding support either through faculty member's grants (i.e., graduate research assistantships) or through departmental teaching assistantships.

4. Evidence of Student Demand

The student demand for this program is strong. We base this assessment on the following evidence:

- In 2006, the graduate studies coordinator in HDFS received a total of 47 inquiries from external students inquiring about the availability of a Ph.D. program. This number of inquiries has been fairly consistent over the past 5 years and has included inquiries from students in the U.S. as well as students abroad (e.g., China).
- Data provided by 9 peer departments with a Ph.D. program in Applied Developmental Science shows that between 10 and 15% of applicants are admitted to their programs. This admission rate suggests that demand for doctoral training in Applied Developmental Science is currently not adequately met.
- Between 1991 and 2001, 30 of 97 students (30.9%) who received master's degrees in HDFS applied to doctoral programs. Twenty-nine of these 30 applicants (96.7%) were accepted into one of the programs of their choice. However, almost all said they would have rather completed their doctoral studies at CSU.
- Each year we make offers to and lose the brightest and most promising graduate students to programs that offer a Ph.D.

Moreover, while student demand for the program is strong, it is also of paramount importance to recognize that faculty demand for the program is equally strong. The production of high quality research and its application, particularly the contextually bound and longitudinal research that is the hallmark of Applied Developmental Science as well as HDFS more broadly, depends on the close working relationship between mentors and graduate students. This involves training and the acquisition of advanced research skills, which is very hard to accomplish under a 2-year masters experience. Therefore, a doctoral program is imperative to support our research engine.

Finally, graduate programs with applied emphases are especially likely to attract applications from underrepresented groups. Graduate programs in human development and family studies, family and consumer sciences, and psychology are well known to attract

applications from minority groups, women, and international applicants. Recent data reported by the National Science Foundation, for example, show that graduate programs in the social and behavioral sciences attract not only ethnically diverse students, but also students whose baccalaureate degrees were in science and engineering.

5. Duplication/Similar Programs in the State

Colorado State University is presently the only institution of higher education in the State of Colorado offering a degree program in Human Development and Family Studies at the baccalaureate and master's levels. Based on our reviews of the existing programs in Applied Developmental Science, the proposed Ph.D. program would be the **only such program between Minneapolis and the Pacific coast.**

In the State of Colorado potential overlap may be perceived between existing Ph.D. programs at the University of Northern Colorado, the University of Denver, the University of Colorado at Boulder, the University of Colorado at Denver and Health Sciences Center, and the University of Colorado at Colorado Springs. However, the PhD proposal was presented to the respective program heads at each of these institutions, and each attested that their Ph.D. program does not overlap in any significant way with the Ph.D. program in Applied Developmental Science.

For example, although the University of Northern Colorado offers a specialization in human development within educational psychology, the focus of this specialization is firmly on educational settings. Given this focus, the program at the University of Northern Colorado excels at educational measurement, learning and cognitive processes, and instructional methods. Similarly, the developmental psychology program at the University of Denver is visible because of its emphasis on basic research on children and adolescents. In contrast to the proposed program in Applied Developmental Science, however, there is no focus on applications from a lifespan development, family systems, or ecological perspective.

None of the existing doctoral programs at the University of Colorado at Boulder (i.e., Ph.D. in Psychology and Ph.D. in Sociology) overlap in their training with the proposed Ph.D. program in Applied Developmental Sciences. Similarly, neither the Ph.D. program in Health and Behavioral Sciences at the University of Colorado at Denver and Health Sciences Center (with its focus on health and social epidemiology), nor the Ph.D. program in Clinical Psychology (with a curricular emphasis in Geropsychology) at the University of Colorado at Colorado Springs overlap in major ways with the proposed Ph.D. program.

Finally, owing to the fact that the Lifespan Track in Applied Social Psychology at CSU has been phased out, and that Psychology does not have a Developmental area, there is no duplication internally. *Thus, the proposed Ph.D. program in Applied Developmental Science at CSU does not duplicate any existing programs in Colorado, but represents a unique program that will train highly qualified professionals who can address major challenges of social importance in the 21st century.*

6. Student Body

The ideal number of students enrolled in the program once it is steady state is about 16-20. Based on this steady state, we anticipate graduating 2-4 students each year, once the first cohort has moved through. This number may vary somewhat based on faculty funding and the number of new faculty positions we are able to garner. In addition, our program will allow entrance at the Bachelor's or Master's level, and depending on that mix, the number might fluctuate somewhat. We expect that a given faculty member will not take on as primary mentor more than about two doctoral students simultaneously. In addition, we will be maintaining our terminal Master's programs, and have included this consideration in our calculations. Our goal is to provide a strong, top quality doctoral program, and our emphasis is on quality not quantity.

7. Admission Requirements

We will require strong GRE scores – at or above the 50th percentile – for admission even though the GRE is not required at the university level. No other requirements are proposed that are higher than CSU minimum requirements, although we anticipate that most of our admitted students will exceed the minimum requirements. Our explicit entrance requirements are:

- BA/BS or MA/MS in Human Development and Family Studies, or related field
- If MA/MS enrollment, the student must have completed an acceptable thesis, or will be required to complete first year project equivalent to a thesis.
- GPA: 3.0 or higher
- GRE General test: Verbal and Quantitative scores at 50th percentile or greater, and Analytical Writing score of 4.5 or higher
- For nonnative speakers of English, minimum score of 550 on the TOEFL, 220 on computer version, or 80 on the internet version
- Availability of funding and identified faculty mentor
- At least 2 courses in human development at the undergraduate level, with B or better
- At least one undergraduate course in statistics, with B or better

8. Course of Study

Students can enter the Applied Developmental Science program with a completed Master's degree or with a completed Bachelor's degree. Students entering with a Bachelor's will be required to complete a Master's in HDFS, with a specialization in Marriage and Family Therapy or Family and Developmental Studies.

The Ph.D. is a 76 credit-hour degree, designed to be completed in a 4-year time-frame (19 credits per year). Up to 30 credits can be applied from the Master's. 22 credits are earned in core courses; 18 credits are earned in thesis and dissertation credits (HDFS 699 & 799); 12 credits are earned in required research apprentice or internship settings (HDFS 698A, 698B, 687 or 684); and 24 credits are earned in electives, including a required statistics elective (3 credits) and a required general elective (3 credits) outside of HDFS.

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Applied Developmental Science core courses include all of the following:

	<u>Credits</u>
HDFS 500 Issues in Human Development and Family Studies	3
HDFS 501 Readings in the Discipline	1
HDFS 524 Family Theory	3
HDFS 550 Research Methods I	3
HDFS 610 Risk and Resilience	3
HDFS 650 Research Methods II	3
HDFS 710 Theories of Applied Developmental Science	3
HDFS 750 Multivariate Research Methods	3

Applied Developmental Science electives include 24 credits selected from the following:

	<u>Credits</u>
HDFS 612 Adolescent Development	3
HDFS 613 Adult Development and Aging	3
HDFS 630 Socioemotional Development	3
HDFS 631 Cognitive Development	3
HDFS 528 Child and Family Assessment	3
HDFS 592 Grant Writing–Human Services and Research	3
HDFS 600D Advanced Studies: Program Planning and Evaluation	3
HDFS 740 Family Policy and Programming	3
Methodology/Statistics elective	3
Open Elective	3

In addition, the Graduate School requirement of a Preliminary Exam will be met by completing HDFS550, HDFS650, HDFS500, HDFS524, and 6 credit hours selected from HDFS630, HDFS631, HDFS612, or HDFS613. A grade of B or A is required in each course.

Competency projects are to be agreed upon between the student and the Ph.D. Committee. Normally, the projects will consist of (a) a teaching competency in which the student is supervised by a faculty member in teaching an undergraduate course for at least half a semester; (b) a research competency in which the student conducts a programmatic series of studies on a specialty topic, which often include follow-up studies to the M.S. thesis; and, (c) an extensive literature review and/or systematic investigation (including a grant proposal, at the student's option) leading up to the dissertation.

9. Assessment of Student Learning/Outcomes Evaluation

Assessing the success of the program will be based on several metrics. First, student learning will be assessed by completion of candidacy, competency, professional development and career goals, and thesis projects as determined by a four-person graduate committee that is tailored to the student's interests and goals. Second, program assessment will entail aggregate assessments of student products, faculty and supervisor evaluations, and student self-reflections (e.g., internship journals and exit interviews). Third, successful placement of the student in careers of choice, and the prestige of such placement, will serve as criteria as well.

Program evaluation is a critical facet of the culture of the College of Applied Human Sciences, and the Department of HDFS specifically. HDFS has a record of annual programmatic evaluations, and the metrics for this degree program will be integrated into our broader departmental activities. We have a departmental outcomes assessment committee that coordinates and synthesizes all outcomes assessments, and will include those specified for this degree. Thus, we will use CSU's PRISM system to:

- Document knowledge and skill competencies in:
 - Research methods;
 - Content knowledge;
 - Critical thinking/analytic skills; and
 - Translational and application skills.
- Document career development outcomes related to:
 - Career development plans during the program; and
 - Graduation and placement outcomes.

10. Faculty

HDFS has 14 Resident Instruction faculty including 7 Professors, 2 Associate Professors, and 5 Assistant Professors (including 2 new hires who are starting FY09). The HDFS faculty also includes 2 Extension Faculty (1 tenured Professor; 1 Specialist), 1 full-time non-tenure-track Assistant Professor, and 7 adjunct/affiliate faculty in other departments. The core HDFS faculty have the requisite expertise to cover the content areas related to the degree. However, we also request faculty expansion funds for 2 new assistant professor positions (in adulthood and aging, and in developmental research methodology). This number is based on assessments of number of faculty at peer institutions with similar programs, the fact that we have a large undergraduate program (around 600 students) and are simultaneously striving to build a top graduate program that also includes two terminal masters degrees (currently 32 students), and that we are seeking to continue to build a visible and funded research program (FY08 research expenditures were \$710,000; FY08 submitted proposals totaled \$6.1 million). The specific content areas are based on an assessment of where the unit is thinnest in expertise, and where there exist opportunities for strategic growth related to scholarship and extramural funding.

This degree program will have no negative impact on our commitment to students in other program areas. A positive impact is expected for incoming graduate students, as well as those here who have not completed their master's degree yet, as they will have an option for a doctoral degree, in their own discipline, that was not available at CSU previously. We further expect the Ph.D. students will serve as role models for the undergraduate and masters programs.

11. Library Reference Sources

The Library Staff has completed an assessment of library resources, and this has been certified by the Dean of the Libraries. Essentially, the collection is strong in all formats, and particularly strong in monographs when compared to three comparison institutions. Several

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journals were identified as potential additions to further strengthen the already adequate collection.

12. Facilities, Equipment, and Technology

HDFS is equipped to offer this program. Facilities are currently adequate and can easily accommodate the expected first class of doctoral students. Facilities will be further enhanced with a planned departmental move to the new CSU Academic Instruction Building in Spring 2010. Equipment is adequate. However we will require software for advanced methodological training that is above and beyond what is provided by the College of Applied Human Sciences (CAHS). After discussion with CAHS IT staff, we expect that these licenses can be provided through student technology fees.

13. Summary of Budget Needs/Impact

The Ph.D. in Applied Developmental Science builds on the infrastructure already in place in our current Master's programs and from participating in two interdisciplinary PhD programs (one in Psychology and one in the School of Education). To be noted, as a result of a new Strategic Plan in Psychology, the Lifespan Development track in Applied Social Psychology that HDFS participated in is being phased out; however, previous participation gave us the opportunity to develop the majority of the core and elective courses in this planned program. Thus, the Applied Developmental Science curriculum is now completely developed and will be housed in HDFS. Moreover, both Psychology and the School of Education are supportive of the PhD in Applied Developmental Science and see it not only as non-competitive and filling an important scientific area but complementary; therefore, both have written strong letters of support that are attached to the full proposal.

Although the infrastructure is largely in place to run the program, HDFS is requesting a modest investment to support a high quality program. Thus, we have requested targeted funds during a 4-year ramp-up, marketing, and growth period that include base faculty expansion salary and one-time start-up funds for 2 faculty positions (adult development and aging; developmental research methodology); 7 additional GTAs (stipend & tuition); operating funds to cover 25% of administrative assistant and a course buy-out for the graduate coordinator; marketing money (one-time for 4 years); and base funds to the library to cover some additional library resources.

We have estimated a return on investment based on tuition related to graduate enrollment in the program and on research returns from increased grant funding. Based on these projections, we conservatively anticipate the program to be self-sufficient and making money no later than the 4th year out. Should new external funding increase at a rate greater than we have estimated (based on past experience), which would also likely increase the number of students admitted to the program, we expect to see the time to self-sufficiency accelerate.