The Honorable Denise Moreno Ducheny  
Chair, Joint Legislative Budget Committee  
State Capitol, Room 5035  
Sacramento, California 95814  

Dear Senator Ducheny:

Pursuant to Item 6440-001-0001, Provision 15, of the 2007 Budget Act, enclosed is the University of California’s annual report to the Legislature on Efforts To Meet California’s Nursing Needs.

If you have any questions regarding this report, Associate Vice President Debora Obley would be pleased to speak with you. She can be reached by telephone at (510) 987-9112, or by e-mail at Debora.Obley@ucop.edu.

Sincerely,

Robert C. Dynes

Enclosure

cc:  The Honorable Jack Scott, Chair  
Senate Budget and Fiscal Review Subcommittee #1  
(Attn: Ms. Amy Supinger)  
(Attn: Ms. Cheryl Black)  
The Honorable Julia Brownley, Chair  
Assembly Budget Subcommittee #2  
(Attn: Ms. Sara Bachez)  
(Attn: Ms. Amy Rutschow)  
Ms. Elizabeth Hill, Legislative Analyst  
Mr. Mike Genest, Director of Finance  
Mr. E. Dotson Wilson, Chief Clerk of the Assembly  
Mr. Gregory Schmidt, Secretary of the Senate  
Ms. Diane Boyer-Vine, Legislative Counsel  
Ms. Sara Swan, Department of Finance  
Mr. Steve Boilard, Legislative Analyst’s Office  
Joint Legislative Budget Committee (18)  
Provost Wyatt R. Hume  
Executive Vice President Katherine N. Lapp  
Vice President Patrick J. Lenz  
Associate Vice President Cathryn L. Nation  
Associate Vice President Debora Obley  
Interim Assistant Vice President Karen French  
Interim Associate Director Jenny Kao
UNIVERSITY OF CALIFORNIA

LEGISLATIVE REPORT ON

EFFORTS TO MEET CALIFORNIA’S NURSING NEEDS

An Update on Meeting Enrollment Goals

Item 6440-001-0001 of the 2007 Budget Act states in part:

“15. Of the funds provided in Schedule (I), $1,617,000 is appropriated to fund the full cost of a minimum of 122 full-time equivalent students in entry-level clinical nursing programs and entry-level master’s degree programs in nursing, and $103,000 is to support an additional 20 master’s degree level nursing students. This funding is intended as a supplement to marginal cost support provided within the University of California’s enrollment growth funding, in recognition of the higher costs associated with master’s degree level nursing programs. The university shall report to the Legislature and the Governor by May 1, 2008, on its progress toward meeting this enrollment goal.”

This report responds to this request and provides background and context for the funding of nursing program expansions in California. It shows that the University of California (UC) increased by 122 full-time equivalent students in entry-level clinical nursing programs and entry-level master’s degree programs in nursing and additional 20 master’s degree level nursing students, as well as by an additional number of masters nursing students funded in the 2007 Budget. The increases are in master’s degree programs as specified in nursing programs at UC Los Angeles and UC San Francisco. The report also provides an overview of future plans in nursing. Additional details and background information about UC nursing programs are provided in the Appendix.

I. FUNDING FOR EXPANDING NURSING PROGRAMS

Background on Senate Bill 73. As part of the negotiations on the 2005-06 budget, the Legislature proposed adding $4 million to the California State University (CSU) budget to expand master’s degree enrollments in nursing. While sympathetic to the need, the Governor vetoed all but $560,000 of the funding for CSU because of doubts that the full amount could be absorbed effectively in expanded enrollments during the 2005-06 budget year. The Governor did, however, set aside the vetoed amount ($3,440,000), pending legislation proposing more effective approaches to address the nursing shortage and opening the possibility of involving UC as well as CSU. Senate Bill 73 (Committee on Budget and Fiscal Review, 2005), appropriated $1.72 million each to UC and CSU specifying that the funds could be used for one-time costs related to expanding nursing programs in 2005-06, with the expectation that the funds be used on an ongoing basis to support the actual expansion of nursing enrollments in 2006-07.

UC added 85 master’s students and 108 undergraduates for a total of 193 students in 2006-07, expecting to use the funding provided by SB 73. However, using a strict interpretation of the SB 73 legislation which limited the funding support to graduate enrollment increases, the State provided funding for 65 of the graduate nursing students ($860,000) and stipend support for 20
additional graduate nurses ($103,000), but withdrew $757,000 of SB 73 funding from the UC budget. In 2007-08, the State restored these remaining funds ($757,000), which were sufficient to support 57 of the proposed 95 graduate nursing enrollment increases in that year. The remaining 38 of the 95 students were funded from workload funding in the 2007 Budget Act. Therefore, funds from SB 73 ($1.72 million in total) provided state resources to increase UC graduate enrollments over a two year time period – with $1,617,000 for 122 students in entry-level clinical nursing programs, and an additional $103,000 provided for stipend support for an additional 20 graduate nurses in traditional masters programs.

**Additional Funding for Nursing Enrollment Workload Increases.** The UC Office of the President entered into an agreement (“Compact”) with the Governor’s Office in 2004 that provided for annual growth in state funding for UC’s basic budget and enrollment growth (beginning in the 2005-06 fiscal year extending through 2010-11) in exchange for UC’s commitment to accountability in specified areas. Funds provided to UC under the Compact contributed to resources that allowed additional undergraduate and graduate nursing enrollments to increase from 2005 - 2007. In addition to the SB 73 stipend support provided for the 20 graduate nurses in the traditional masters nursing program funded in 2006, those nursing students received the usual general campus marginal cost of instruction funding from UC workload funding. Of the 95 masters nursing students funded in 2007-08, 38 students received UC workload funding. Additional financial support for the nursing programs comes from fee revenue generated from mandatory system wide student fees paid by all students, and from a professional fee charged to graduate professional nursing degree students (i.e. Master’s students).

**II. 2005 – 2007 ENROLLMENT GROWTH**

Currently, nursing programs are offered at three UC campuses - UC Los Angeles, UC San Francisco, and UC Irvine. Although the 2007 Budget Act requires UC to update the Legislature and the Governor on Master’s degree enrollments only, nursing enrollment data is included below for all UC Nursing programs (baccalaureate, master’s and doctoral degree programs). This information is included in order to provide a more comprehensive view of UC efforts to address statewide nursing needs and to increase educational opportunities for students. Additional details that describe the various UC degree programs are provided in the Appendix.

**Baccalaureate Program Enrollments.** Both UCLA and UCI began new four-year undergraduate nursing programs in Fall 2006. In 2007-08, each campus accepted their second cohort of students, for a total increase of 234 students as compared to 2005-06 levels when UC did not offer a four-year undergraduate curriculum. In addition, UCLA offers a small “bridge” program for students who are already licensed as a registered nurse, have earned an Associate’s Degree in Nursing and wish to prepare for advanced practice study at the graduate level. Thirty six students were enrolled in this program in 2007-08.

**Master’s Program Enrollments.** The language in the 2007 Budget Act called for a minimum increase of 122 students in UC’s master’s entry nursing programs and an additional 20 master’s degree level nursing students. With SB 73 funding combined with UC workload funding in 2006 and 2007, UC received State resources to support a two-year increase of 180 graduate master’s
nursing students. As compared to the 2005-06 academic year (baseline enrollment level before SB 73 funding), UC increased master’s program enrollments by 185 students over the two-year period.

Both UCLA and UCSF offer Master’s programs at their Schools of Nursing. In 2007-08, UCLA enrolled 346 students in their Master’s programs, an increase of 127 students from 2005-06 enrollment levels. This enrollment growth included 110 students in the newly established Master’s Entry Clinical Nursing (MECN) program, and an additional 17 students in the traditional master’s program. In that same year, UCSF enrolled 398 students in their Master of Science program, an increase of 58 students from 2005-06 enrollment levels. This enrollment growth occurred from additional students in the Master’s Entry Program in Nursing (MEPN) and the traditional master’s program.

**Doctoral Program Enrollments.** The UCLA and UCSF Schools of Nursing both offer a Doctor of Philosophy (PhD) program. Two hundred and one students enrolled in UC doctoral nursing programs in 2007-08, which represents a modest decrease (13 students) as compared to 2005-06 enrollment levels. UCLA maintained enrollment of 39 doctoral students as anticipated. UCSF enrolled 162 students in 2007-08, compared to 175 in 2005-06. A contributing factor to the slight enrollment decrease was that UCSF graduated a record 46 PhD students in June of 2007 (previously, approximately 20 doctoral students graduated each year). This increase in PhD graduates is largely attributed to funding available to certain students from the Betty Irene Moore Accelerated Doctoral Program (Gordon and Betty Moore Foundation grant to UCSF in 2004 intended to increase the number of nursing faculty in the San Francisco Bay Area by spurring doctoral degree completion in three years, rather than the national average of eight years). Thus, with generous Moore Foundation support, UCSF was able to more quickly train nursing faculty.

**Enrollments in UC Nursing Programs (2005/06 - 2007/08)**

<table>
<thead>
<tr>
<th>Program</th>
<th>2005-06</th>
<th>2007-08</th>
<th>2 Year Increase (2005-06 – 2007-08)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s of Science (BS)*</td>
<td>38</td>
<td>270</td>
<td>232</td>
</tr>
<tr>
<td>Master’s Entry Clinical Nursing Program (MSN)</td>
<td>0</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Master’s – Traditional (MSN/MS)**</td>
<td>559</td>
<td>634</td>
<td>75</td>
</tr>
<tr>
<td>Doctor of Philosophy (PhD)</td>
<td>214</td>
<td>201</td>
<td>(13)**</td>
</tr>
<tr>
<td><strong>Total UC Enrollments</strong></td>
<td><strong>811</strong></td>
<td><strong>1,215</strong></td>
<td><strong>404</strong></td>
</tr>
</tbody>
</table>

* Includes students in a small UCLA “Bridge” program for Associate Degree nurses
** Includes students entering after one-year in the UCSF Master’s Entry Program in Nursing
*** Availability of Betty Irene Moore Doctoral Nursing Fellowships accelerated degree completion for some students
III. FUTURE UC NURSING PLANS

In view of California’s significant and growing shortages of nurses and nursing faculty, UC continues to work with its schools and campuses - and in conjunction with the California Community College and California State University systems – to provide increased opportunities (given adequate resources) for California’s students to become nurses and advance within the nursing field. These latter efforts are crucial in view of major statewide needs for new nursing faculty.

With encouragement from the Governor’s Office and the Legislature, UC developed a four-year systemwide plan for expanding nursing enrollments, with implementation beginning in Fall 2006. The Table below shows the planned cumulative enrollment growth for UC’s nursing initiative through 2008-09.

<table>
<thead>
<tr>
<th>Cumulative UC Nursing Enrollment Growth from 2006-07 to 2008-09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Graduate programs</strong></td>
</tr>
<tr>
<td>Graduate programs</td>
</tr>
<tr>
<td>Undergraduate programs</td>
</tr>
<tr>
<td><strong>Total – All Levels</strong></td>
</tr>
</tbody>
</table>

^ Proposed in the UC Regents’ Budget (November 2007)

UC had hoped to continue with plans in 2008-09 to increase student enrollments in nursing given the importance to state workforce needs. In the 2008-09 Regents’ Budget, UC requested support for the following year three expansion plans: 82 graduate professional master’s nursing students, 22 graduate academic students, and 100 undergraduate nursing students. These increases were included as part of UC’s budget plan for 2008-09 and as approved by the Regents at the November 2007 meeting. In developing the Governor’s 2008 Budget, the Department of Finance first “funded” a normal workload budget consistent with the Compact with the Governor and then proposed a 10% reduction to that higher budget to address the State’s fiscal situation. The net result between 2007-08 and 2008-09 is a reduction to UC’s base budget of $108 million. Thus, several items from UC’s 2008-09 budget request were first “funded” and then that funding was subsequently eliminated. The items funded before the reduction was taken included funding for MD students in UC’s Programs in Medical Education (PRIME). It also included support for health sciences enrollment increases funded at the UC general campus marginal cost of instruction, such as undergraduate nursing, pharmacy professional (PharmD) students, and graduate academic health sciences enrollment growth. It did not include support for expanded graduate professional programs that required a supplement to the marginal cost of instruction, such as nursing or public health master’s professional students.

The University has made a decision to ask campuses, to the best of their ability, to implement those enrollment growth increases that had originally been included in the Governor’s Budget.
before the 10% cut was taken. This enrollment growth, including growth planned in MD students in the PRIME programs, will be funded through an internal redirection of existing resources. It is unlikely UC will implement enrollment growth proposed in health sciences programs that was not included in the normal workload version of the Governor’s Budget. Given uncertainties associated with accommodating unfunded enrollment growth at the campus level for 2008-09, UC is not yet able to project health sciences enrollment increases, including nursing enrollment increases, for 2008-09 at this time.

The current difficulties with the California state budget place future plans for nursing enrollment growth in serious jeopardy. State funding for enrollment growth in these nursing programs are essential to maintain program quality and student affordability. Enrolling students without adequate state resources is not viable or sustainable.

Plans for growth if adequate resources are provided:

**UC Los Angeles.** Current plans include modest proposed growth in their post-licensure RN-BS program in 2008, and continued growth in their Baccalaureate degree program - which would reach steady state enrollment with 200 students in 2009-10, if growth continues as planned.

**UC Irvine.** Current plans include continued growth in their Baccalaureate degree program – which would reach steady state enrollment with 150 students in 2008-09, if growth is funded and occurs as planned. In addition, UCI is planning new graduate programs at both the master’s (MS) and doctoral (PhD, DNP) levels – anticipated to begin in Fall 2009. UCI’s Master’s program proposal is well developed and is currently undergoing system-wide Academic Senate review. Pending necessary approvals, UCI is hoping to begin a Master’s program as soon as Fall 2008 with possible private support to assist with temporary start-up funding (negotiations underway).

**UC Davis.** In July 2007, the Gordon and Betty Moore Foundation announced $100 million in founding support to launch the Betty Irene Moore School of Nursing at UC Davis. The landmark Moore Foundation gift to UCD is the largest donation ever made to UC Davis and the largest ever made in support of nursing education. Pending necessary program approvals and pending adequate State support for enrollment growth, UCD anticipates admitting its first students in the master’s and doctorate programs in the fall of 2009. The bachelor’s of science in nursing program is expected to open within two years after the graduate program begins. When full enrollment is reach in all degree programs (both graduate and baccalaureate), the school is projected to serve 456 students.

**Overall.** Although budgetary circumstances remain difficult, UC’s continuing efforts to increase nursing enrollments were successful, including growth in master’s degree enrollments as reflected in the 2007 Budget Act. In view of California’s significant and growing shortages of nurses and nursing faculty, UC will continue to work with its schools and campuses to assess the feasibility of future additional enrollment growth throughout its nursing degree programs, provided that adequate resources are available to support this growth.
IV. APPENDIX – ADDITIONAL BACKGROUND INFORMATION

California’s Nursing Crisis: California’s nursing shortage is serious and growing. The state ranks 50th in the nation in the number of nurses per capita (589 vs. the U.S. average of 825 nurses per 100,000). Causes of the nursing shortage include rapid population growth (especially of those over age 65); an aging nursing workforce (California nurses are 5 years older than the national average and a large proportion are over age 50); increasing mean age of nursing faculty nearing retirement; and limited nursing school enrollment capacity and insufficient funding for education.

Planning for Growth in UC’s Nursing Education Programs


In the area of Nursing, the Council recommended “substantial enrollment growth, with a focus on graduate education in nursing and the need to train increased numbers of future nursing school faculty.” The Council also recommended that new programs at the undergraduate level be developed to increase educational opportunities for undergraduates and to help build the pool of students who will go on to graduate study, stating “…This should include growth in existing nursing schools and programs and creation of new ones at new locations.”

The Council called for development of new educational models involving interdisciplinary training and team-based approaches to patient care; and redoubled efforts to significantly increase the diversity of all UC health professions faculty and students, with stable funding provided to support best practices and model programs. The Council also encouraged innovative approaches to teaching, including telemedicine, distance learning, and use of new technologies.

UC Nursing Programs: UC operates two Schools of Nursing (UCLA and UCSF), and a new Program in Nursing Science (UCI). Until fall 2006, UCLA and UCSF offered only graduate nursing education, with the exception of a small 3rd and 4th year baccalaureate program offered at UCLA for students who are already licensed as a Registered Nurse. The graduate programs play a central and critical role in preparing advance practice nurses and future faculty. Faculty shortages in nursing exist statewide and are a major barrier to increasing enrollments at UC, CSU and CCC campuses.

Overview of UC’s Nursing Schools and Programs

<table>
<thead>
<tr>
<th>Campus</th>
<th>Type</th>
<th>Year established</th>
<th>Degrees offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC San Francisco</td>
<td>School of Nursing</td>
<td>1907</td>
<td>MS, PhD</td>
</tr>
<tr>
<td>UC Los Angeles</td>
<td>School of Nursing</td>
<td>1949</td>
<td>BS, MSN, PhD</td>
</tr>
<tr>
<td>UC Irvine</td>
<td>Nursing Science Program*</td>
<td>2005</td>
<td>[BS, MS, DNP, PhD]**</td>
</tr>
<tr>
<td>UC Davis</td>
<td>Under development*</td>
<td>Under development</td>
<td>[BSN, MSN, PhD]**</td>
</tr>
</tbody>
</table>

* UC Irvine and UC Davis plan to seek School of Nursing status
** Anticipated degree offerings; First cohort of students have not yet graduated
A. Baccalaureate Degree Programs

UC currently offers two baccalaureate nursing programs – one at UC Irvine (launched Fall 2006) and the other at UCLA (re-established in Fall 2006). Both programs continue to steadily build their programs and work towards steady state enrollments. College-bound high school graduates interested in nursing, but strongly committed to a UC undergraduate education, once again have the opportunity to do both. The BS programs at both campuses are four year programs. These programs continue to draw strong and growing interest from undergraduates with highly competitive applicant pools.

UC Irvine
The Baccalaureate in Nursing Science offers talented and highly motivated undergraduates the opportunity to enter the healthcare environment with an education founded upon the theory and practice of nursing. Completion of the program’s curriculum will lead to a Bachelor of Science (BS) degree in Nursing Science, a key asset for today’s nurses, who must provide care to a diverse group of patients through evidence-based practice. Graduates of the Program in Nursing Science are prepared to serve as generalists in professional nursing practice and to collaborate with other healthcare providers in clinics, hospitals, and community health settings. The undergraduate program prepares students for success in academia as well; graduates are poised to attain advanced degrees in Nursing Science and to significantly contribute to the field through original research.

UC Los Angeles
The Nursing Generic/Prelicensure program for undergraduate study leading to the Bachelor of Science (BS) degree in Nursing was re-established in Fall 2006. The BS/Generic Prelicensure program is designed to prepare students for a career in nursing and focuses on managing both individuals and population-based cohorts within an acute care hospital or medical center. Conceptually, the curriculum has been developed according to the principles of primary, secondary, and tertiary prevention; moving from a systems, population-based approach, to a cohort-based or unit-based perspective, and culminating with an intense focus on the individual-level of care. Graduates of the program will be well-prepared to deal with the demands of the present day high acuity patient populations and sophisticated technological environments. The program provides a BS degree with a major in Nursing and eligibility to take the National Council Licensing Examination (NCLEX) to be certified as a registered nurse (RN) after completion of the program.

B. Entry-Level Clinical and Entry-Level Master’s Degree Programs in Nursing

UC offers two master’s entry nursing programs: the Master’s Entry Clinical Nurse Program (MECN) at UCLA, and the Master’s Entry Program in Nursing (MEPN) program at UCSF. The two programs differ in curriculum, length of program, fee structure and objectives. Both are master’s level professional nursing programs in which the students enter without having a baccalaureate degree in nursing or having completed the requirements for RN certification.
UC Los Angeles Master’s Entry Clinical Nurse Program – MECN
The School of Nursing at UCLA offers an entry-level master’s degree program, called the Master’s Entry Clinical Nurse Program (MECN). The MECN is a two-year program that enrolled its first students in 2006, in which students enter without an undergraduate degree in nursing and earn both a master’s degree and satisfy the requirements for RN licensing concurrently. The students are prepared for careers as bedside nurses with more skills in managing a unit in a hospital (e.g., having the ability to deal with administrative and cost issues), as well as more skills in using, and helping to conduct, research than RNs who have not had graduate level instruction. Students in the MECN program pay the same fees as those paid by other nursing Master’s students – the Educational, Registration and Nursing Professional fee.

The MECN program assumes that students have completed a comprehensive undergraduate curriculum that will have satisfied some of the BSN licensing requirements. Prerequisites for the program include statistics, anatomy and physiology, as well as chemistry, epidemiology, microbiology, and a course in nursing fundamentals (or C.N.A. certification). The program also encourages the completion of at least one course in psychology and communications or speech prior to enrolling. Other RN licensure requirements are completed as part of the two-year intensive master’s curriculum.

UC San Francisco Master’s Entry Program in Nursing – MEPN
Students in UCSF’s 3-year long MEPN enter with a BS or BA degree in any field other than nursing. In the initial 12 months of the program, students complete coursework to satisfy the requirements for RN licensure, and then move into the two-year Master’s of Science in Nursing (MS) program. Graduates of the program graduate as “advanced practice nurses" and are prepared for one of three advanced practice roles: nurse practitioner, nurse midwife, or clinical nurse specialist. As such, they are prepared to work independently (although often in close collaboration with physicians) in both primary and specialty health care.

The intensive initial segment of the MEPN program is “self-supporting,” that is, supported by a student fee for the 12-month period (anticipated fees for students beginning Summer Quarter 2008 are $31,000 for the first year). During this self-supporting year, the MEPN students are not included as part of State-funded enrollments because no General Fund support is provided for this initial year. After the first year, however, the students enter the MS program and are included in the State reportable enrollments and do receive State support at the same level as other graduate nursing enrollments. During the MS program years, these students pay the same fees as other nursing Master’s students - the Educational, Registration and Nursing Professional fee.

C. Master of Science in Nursing Programs - Traditional

UC Los Angeles
The UCLA Master of Science in Nursing (MSN) program is a two–year course of graduate study that prepares advanced practice nurse administrators, nurse practitioners and clinical nurse specialists. Students in the MSN program contribute to improving nursing care through research, which includes analysis, articulation, and documentation of the nursing process. The curriculum is designed for students to obtain theoretical and practical knowledge of the foundations for specialized practice, as well as an opportunity to implement that knowledge through advanced
clinical practice. Each area of specialization has requirements over and above the minimum core requirements for the degree.

**UC San Francisco**
The UCSF Master of Science (MS) program is a two-year course of graduate study that prepares leaders in the roles of nurse practitioner, clinical nurse specialist, administrator, teacher, and consultant. Most applicants applying to this program are experienced registered nurses who have successfully completed a bachelor's degree. Upon graduation, all have a base of knowledge in a specific area of nursing; can participate knowledgeable in research activity and application; and are capable of contributing to the formulation of theory and to the application of theory to nursing practice. The Master of Science program is ordinarily a two-year program; the vast majority of students are on full-time status at the university (although many undertake part-time paid work concurrently with their study schedule). Each student must select an area of specialization, with opportunities in a number of fields ranging from midwifery to critical care, and health policy to family nurse practitioner training. For many of these specialty areas, the UCSF School of Nursing is acknowledged to be the leading, or the only, nursing school for that particular specialization area at the master’s level.

**D. Doctor of Philosophy Programs**

**UC Los Angeles**
The UCLA Doctor of Philosophy (PhD) program is research oriented with a focus on clinical nursing research and designed to provide the theoretical and scientific knowledge necessary for scholarly pursuit in nursing. Students will show competence in an appropriate cognate area relevant to their major area of study by completing theory courses in nursing and related disciplines. The purpose of the PhD program is to educate scholars who, through the conduct of original research and the generation of theory, will build the scientific knowledge base for the advancement of nursing practice, research and health care policy. This research focuses on the individual, family, community, and organizational systems within the context of cultural diversity and across the life span to optimize health outcomes. The program emphasizes specific areas of study in which nursing makes a significant contribution towards health. These areas are defined by the research expertise of faculty in the context of the interdisciplinary resources available at the academic and health sciences campus and the local, national and international community.

**UC San Francisco**
The UCSF Doctor of Philosophy (PhD) in Nursing program prepares scientists to conduct research in nursing and to contribute to the body of knowledge in nursing. Graduates of this program focus their careers on generating the knowledge base of the nursing discipline through positions as academic or clinical researchers. The curriculum is designed to develop habits of scholarly thinking. The initial segment of the curriculum provides course work in the areas of research, nursing science and theory development. The emphasis in the middle segment shifts to course work, research residencies, and independent studies that provide a basis for the student's projected dissertation focus and the subsequent initial program of research. The final segment of the program, preceded by the qualifying examination and advancement to candidacy, entails development of a dissertation research proposal, data collection and analysis, and the writing of
the dissertation. The dissertation is a work of independent research that makes an original contribution to knowledge in nursing. A key element of the program is faculty consultation and advising. The program entails approximately four years of academic work.

Additionally, the Department of Social and Behavioral Sciences in the UCSF School of Nursing offers a doctoral program which leads to the PhD in Sociology. The substantive focus of the program lies in the sociology of health and illness and biomedicine, with options for specialization in an area relevant to health. Qualitative research and analysis and quantitative methods are emphasized. The SBS Ph.D. program in Sociology emphasizes the sociology of health, medicine, and health care systems. The department's strong multidisciplinary faculty teach and conduct research across a wide range of interests, focusing on the social, political, and policy level. Areas of expertise include aging and long term care policy; managed care; the tobacco industry and tobacco control policy; substance use policy; feminist theory; women's health; science and technology studies; ethics; health economics; violence and youth, and others. Tailoring programs to meet the individual learning goals of students is an aim of all programs.