California State University
Northridge

B.S. Degree Program in Environmental and Occupational Health

Self Study for the National Environmental Health Science and Protection Accreditation Council

2006-2007

Table of Contents

A. Identification

1. Program: Department of Environmental and Occupational Health

2. School: College of Health and Human Development

3. Institution: California State University, Northridge

4. Contact: Thomas H. Hatfield, R.E.H.S., Dr.P.H.
Chair, Department of Environmental and Occupational Health
California State University
Northridge CA 91330-8285
email: thomas.hatfield@csun.edu
phone: 818-677-4708
fax: 818-677-2045

5. Chair: Same as above

6. Dean: Helen Castillo, Ph.D., R.N.
(Administrator who signs for the institution)

B. General Information

1. Institution's Philosophy

The foundation for all programs that exist within California State University, Northridge is in the official statement that articulates the institution's mission and values. The mission of California State University, Northridge is quoted from page 10 of the University Catalog as follows:

"**California State University, Northridge exists to enable students to realize their educational goals. The University's first priority is to promote the welfare and intellectual progress of students.** To fulfill this mission, we design programs and activities to help students develop the academic competencies, professional skills, critical and creative abilities, and ethical values of learned persons who live in a democratic society, an interdependent world, and a technological age; we seek to foster a rigorous and contemporary understanding of the liberal arts, sciences, and professional disciplines, and we believe in the following values:

1. Commitment to teaching, scholarship, and active learning
2. Commitment to excellence
3. Respect for All People
4. Alliances with the Community
5. Encouragement of innovation, experimentation, and creativity.

Vision: California State University, Northridge is inspired by the belief that our commitment to educational opportunity, inclusion and excellence will extend the promise of America to succeeding generations. Our graduates will be the vanguard of leaders for this century—committed to sustaining a democracy in which diverse people share in the rights and responsibilities of citizenship, proficient in applying technology to wise purposes, and dedicated to securing a humane world community and sustaining the bounty of the Earth.

As an institution of higher learning

• We will be a high performing, model university in which student achievement levels are among the highest of peer universities;
• We will create a community of shared values in which faculty, students, staff, administrators and alumni will experience personal satisfaction and pride in our collective achievements;
• We will be the first choice for university applicants who seek a rigorous, collaborative teaching/learning experience in a technologically rich environment;
• We will be the leader in enhancing the educational, cultural and economic resources of our region; and
• We will receive local and national recognition for our distinctive achievements in teaching, learning, scholarship and service."

2. Program's Mission, Goals, and Objectives:

Mission Statement: "The Department of Environmental and Occupational Health (EOH) provides students with a comprehensive base of knowledge and skills in the recognition, evaluation and control of conditions that can adversely impact human health and the environment. Students will have a solid foundation of basic science, a large body of practical knowledge and a basic set of skills that they can apply on the job. We offer all students, whatever their focus of study, this broad academic foundation. Our students will be instilled with a respect for learning, a desire to continue learning, a commitment to the field of Environmental and Occupational Health and a solid ability to work in interdisciplinary teams. Our students and alumni represent a group of people who have a desire and commitment to effect a positive change in the world.

Goals and Objectives:

- Local employers will value EOH Graduates and recruit EOH graduates because of their solid and up to date academic training and field experience.
- Graduates will pursue and achieve registration and certification appropriate to their career paths.
- Graduates will join professional societies and assume leadership positions in those societies. They will be motivated in part by their desire to be active, and to make a positive difference in the world in which they live.
- Graduates will value lifelong learning (for example, BS Graduates will pursue continuing education or progress to MS; MS graduates will pursue continuing education or doctoral degrees).
- Graduates will contribute to EOH through equipment donations or financial donations, and by supporting an alumni association.
- Graduates will value their education from CSUN. They will recommend to others this career path, and recognize the academic value of EOH at CSUN. It is this last goal that is especially relevant in this era. – unless we are successful at recruiting students and maintaining our enrollments, all other goals and objectives will be endangered.

Learning Objectives

Graduates of the undergraduate program in Environmental and Occupational Health should be able to:

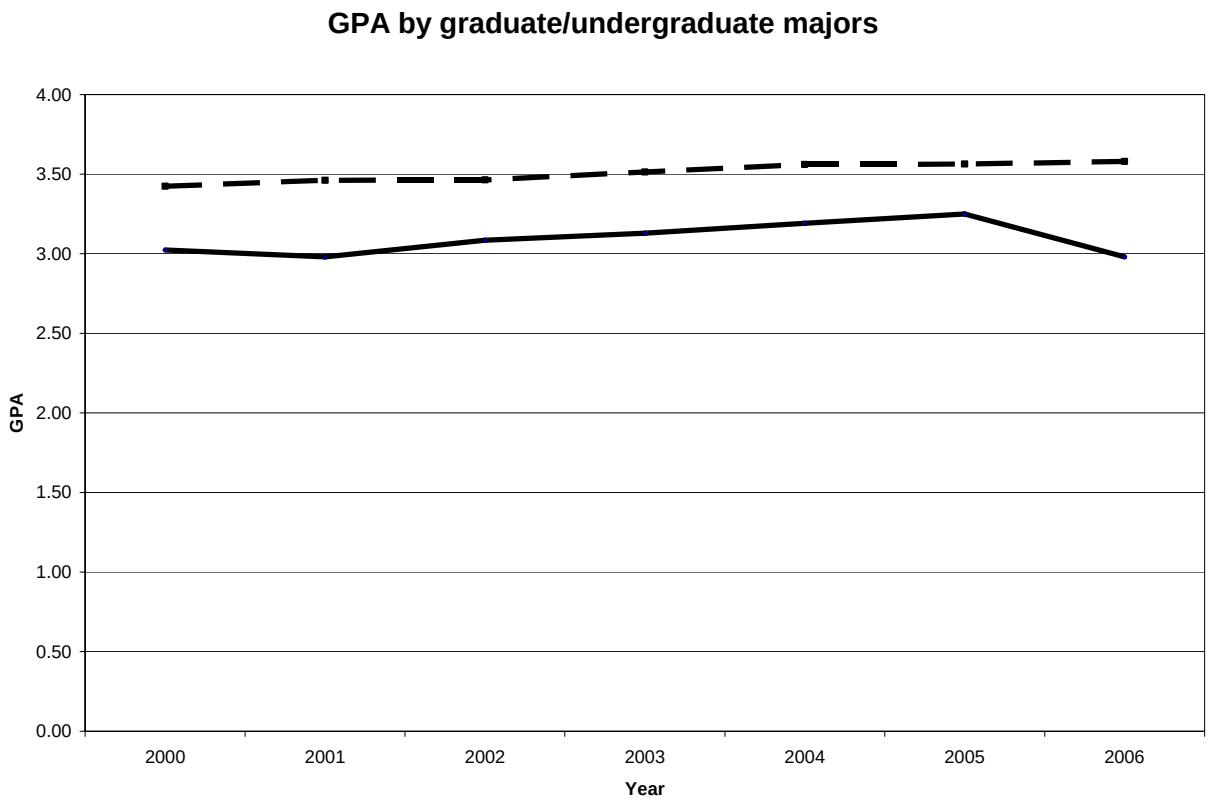
- Demonstrate a comprehensive knowledge of the recognition, evaluation, and control of biological, chemical, and physical factors that can impact on human health and safety, and the environment.
- Work in interdisciplinary teams to promote public and private action to protect public health and the environment.
- Communicate environmental and occupational health concepts and programs to a variety of audiences, using both written and verbal forms of communication.
- Apply mathematical and critical reasoning to understand and incorporate new concepts in the field.
- Demonstrate organizational management and leadership skills.
- Demonstrate knowledge of current regulatory and policy issues.

Evaluation:
We do not rely on any single measure for evaluating the success of our graduates. Furthermore, we believe that informal measures can be extremely useful (e.g., feedback from employers, internship preceptors, professional organizations, and the alumni themselves, all of whom offer positive and constructive feedback). Nevertheless, we follow a number of outcome indicators for ongoing evaluation of the program success:

- National Science Foundation data show that among universities granting M.S. degrees, CSUN is one of the nation's top universities in preparing students who later earn doctoral degrees. At the university level, CSUN ranked **second** in the nation among more than 550 such colleges and universities for the decade 1995 to 2004 (see http://www.csun.edu/pubrels/press_releases/summer06/nsfrank.html
- EOH undergraduates must pass all major courses with a grade of "C" or better. GPA trends are shown on the next page (the dashed lines represent graduate students). The trends appear to be fairly stable, and the slight deviations on the graph are not statistically significant.
- The wide range of employment is reflected in our listing of employed alumni later in this report (see page 18). Employers continue to value our graduates – indeed, they constitute our advisory committee.
- Our graduates have a success rate of over 70% on the state REHS exam (Registered Environmental Health Specialists). According to the California Department of Health Services, this is among the highest pass rates for environmental health programs in California.
- Our graduates continue to play leadership roles in our local professional groups, particularly the California Environmental Health Association, and the Southern California section of the American Industrial Hygiene Association. The largest memberships in each of these local groups continue to be CSUN graduates. Our student group, the Environmental and Occupational Health Students Association, has been increasing in activities and overall membership in the last several years.
- Our graduates continue to pursue education, either through graduate studies or continuing education. This is reflected in the large number of graduate students in our program – about half -- who come from our baccalaureate program.
- We continue to receive donations from alumni, with an increase in our accounts this year due to new donations from Lockheed and Exxon Corporations. Our alumni association is larger and more active than ever before as reflected in the increased number of events over the last several years (three "speed mentoring events", and extensive participation in our jobs symposium.
- Alumni continue to refer students to our program and complement our recruitment efforts. Indeed, after a national drop in enrollments (and in our program), our department enrollments have increased for the last 4 years.

Thus, we believe we meet our mission, goals, and objectives to a high extent. Of course, we are never fully satisfied with the success rates of our students, and we are constantly evaluating outcomes to look for ways to improve. Course content is updated on a continual basis, and all the above measures are evaluated on an ongoing basis.

Figure 1


GPA by graduate/undergraduate majors
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
GPA
2000
2001
2002
2003
2004
2005
2006
Year

3. Organizational Table of Institution

California State University, Northridge (CSUN) is part of the 23 campus California State University system. It is the only public university located in the San Fernando Valley (1.6 million residents) and is one of the largest higher education institutions in California with an enrollment of over 33,000 students as of Fall 2006. CSUN is accredited by the Western Association of Schools and Colleges (WASC). Within the State of California, CSUN is accredited by the State Board of Education. As of Fall 2005, there were about 3,300 faculty and staff at CSUN. Key university officials are:

- University President: Dr. Jolene Koester
- University Provost: Dr. Harry Hellenbrand
- Vice President of Undergraduate Studies: Dr. Cynthia Rawitch
- Vice President of Graduate Studies: Dr. Mack Johnson

The University is comprised of the 8 Colleges:

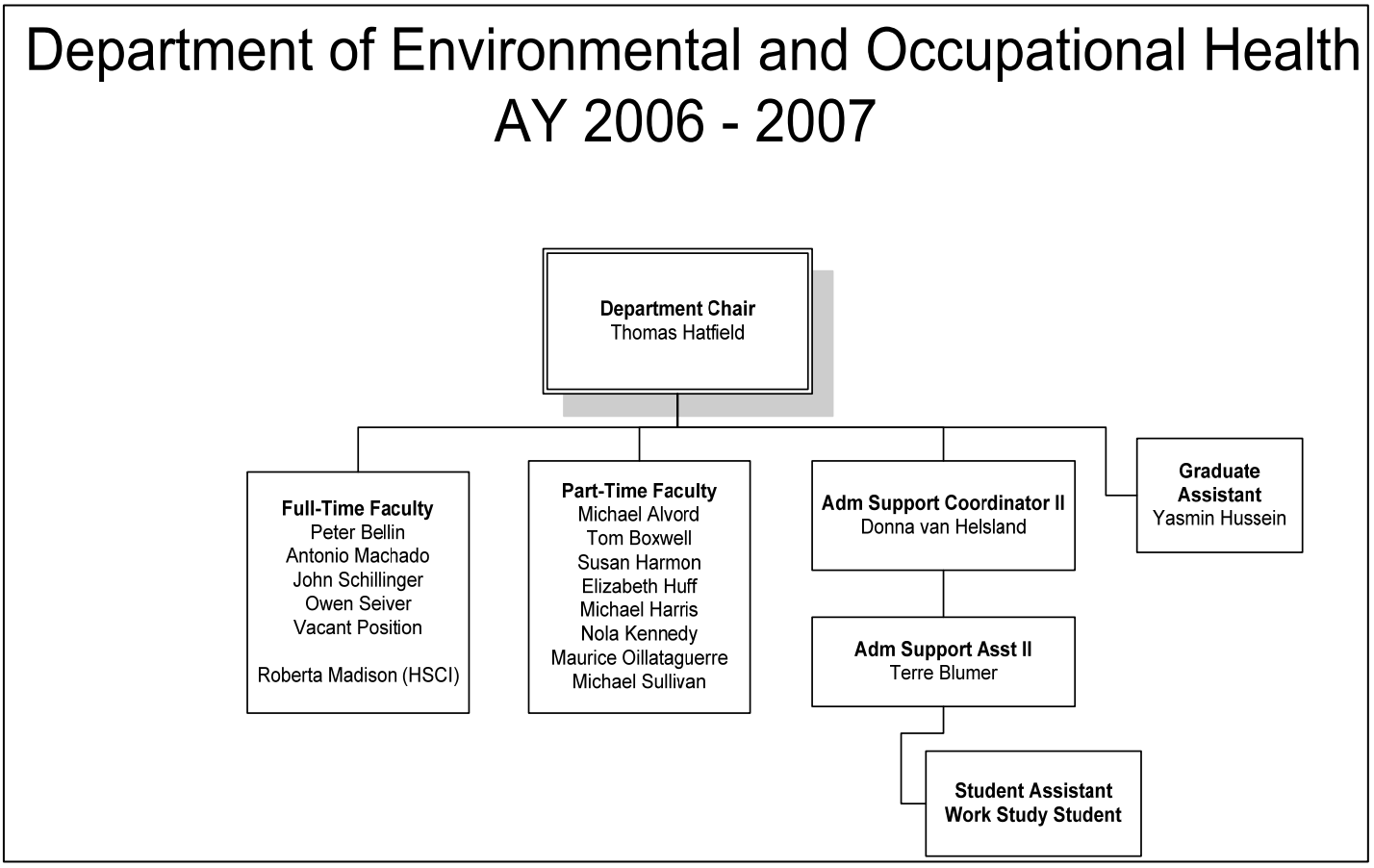
- Arts, Media, and Communication
- Business Administration and Economics
- Education
- Engineering and Computer Science
- Humanities
- Science and Mathematics
- Social and Behavioral Sciences
- **Health and Human Development** (our college)

Each of the colleges is run by a Dean. The Dean of the College of Health and Human Development is **Dr. Helen Castillo**. The College of Health and Human Development is comprised of the following departments:

- Child & Adolescent Development
- Communication Disorders and Sciences
- Family Environmental Sciences
- Kinesiology
- Leisure Studies & Recreation
- Health Sciences
- Physical Therapy
- **Environmental and Occupational Health**

This section has described the functional organizational structure in sequential order. However, more detailed organizational charts can be obtained at: **http://admnps1a.csun.edu/opweb/publishedcharts/csun.htm .** Figure 2 shows the organization structure of the department.

Figure 2:


Department of Environmental and Occupational Health
AY 2006 - 2007
Department Chair
Thomas Hatfield
Full-Time Faculty
Peter Bellin
Antonio Machado
John Schillinger
Owen Seiver
Vacant Position
Roberta Madison (HSCI)
Part-Time Faculty
Michael Alvord
Tom Boxwell
Susan Harmon
Elizabeth Huff
Michael Harris
Nola Kennedy
Maurice Oillataguerre
Michael Sullivan
Adm Support Coordinator II
Donna van Helsland
Graduate Assistant
Yasmin Hussein
Adm Support Asst II
Terre Blumer
Student Assistant
Work Study Student

4. Brief History of our Program:

The EOH Program was established within the Department of Health Science in 1965. The first B.S. and M.S. degrees were awarded in 1969. During the earliest years, all courses specific to the EOH Program were taught by part-time faculty from local agencies and academic institutions.

By 1970, program enrollments had advanced to where a fulltime position was authorized for a program director. That position was filled by Dr. Dennis Kelly during the academic year 1970-1971, with the new EOH Director formally assuming administrative and teaching responsibilities in the Fall of 1971.

The program was fully accredited by the California Department of Health Services in 1972 and has retained that approval to the present. Full accreditation by EHAC (known then as the National Accreditation Council for Environmental Health Curricula) was awarded to the B.S. degree program in 1973. The M.S. degree program was fully accredited by EHAC in 1978, and the B.S. degree program received re-accreditation at that time. Both the undergraduate (UG) and graduate (G) degree programs were again reaccredited in 1987, 1995, and 2002. The CSUN program is one of the longest accredited programs by EHAC at both the bachelor's and master's level.

Both biostatistics and epidemiology have been taught by fulltime faculty (one of them with degrees in environmental health), but these faculty are outside the EOH program and are not included in the fulltime faculty figures.

No discussion of our department is complete without mentioning diversity. Nearly half of the university's graduates are diversity students. With a total student population of nearly 33,000, our university ranks 11th in the nation for the total number of bachelor's degrees awarded to diversity students. At the department level, our program is by far the most diverse in the nation among EHAC accredited programs:

- we have the largest number of Hispanic students (nearly half of the national total),
- we have the largest number of diversity students indicating "other" (e.g., students of multiple ethnicities), making up make up nearly 2/3 of the national total, and
- we have the largest <u>total</u> number of diversity students -- our program alone comprises roughly ¼ of the EHAC national total, and we have more diversity students than 18 of the accredited programs <u>combined</u>.

Significant changes since our last accreditation include:

- Our program was elevated to <u>departmental</u> status in July 2002.
- In 2005, Dr. Dennis Kelly retired and Dr. Victor Liu (Industrial Hygiene) resigned.
- Our department received approval to hire a new tenure track position in 2006.
- New labs have been remodeled in the Engineering Complex, and the building has been renamed Jacaranda Hall to reflect ownership by more than the Engineering department.
- ABET accreditation was initially granted for the B.S. degree in EOH in 1997, and continues through 2009-2010.

C. Curriculum

1. Admission Requirements

Students may be admitted to the B.S. program as freshmen or as transfer students. University freshmen must be academically in the upper 1/3 of graduating high school seniors. Transfer students must meet the minimum GPA requirements of the university (2.0). Faculty members consult with each student prior to signing the change-of-major form. We examine g.p.a., particularly in science related courses, as an indicator of success in the program.

2. Course Requirements

The university catalog is located at: http://www.csun.edu/catalog/ .
EOH core courses in both the undergraduate and graduate programs are taught within the Department of Environmental and Occupational Health by faculty with graduate degrees in environmental and occupational health. Entry into the undergraduate EOH core courses (except Health Science 132, "History of Preventive Medicine and Public Health") requires the completion of a prerequisite science base in biology, math, physics, and chemistry.

To continue in and graduate from the program, undergraduate students must earn a minimum grade of "C" in all required courses and maintain a minimum GPA of 2.0. All students must meet the general education requirements of the university as described on pages 24-31 of the university catalog. This includes a lower and upper division writing requirement as described on page 31 of the university catalog. Computer literacy (email, internet searches, use of word processing, spreadsheets and presentation software) is addressed throughout the core, but is also addressed in the Information Competency required in general education (described on page 24 of the university catalog). A listing of EOH core courses and electives is as follows (science prerequisites are listed on page 14 of this report):

Figure 3. Course Requirements for Environmental Health Program Majors and Their Relationship to EHAC Academic Guidelines.

EHAC Academic Guidelines	Course Designation	Course Name	Semester Credit Hours	% course time on EHAC guideline	Principal Instructor(s)
Foundation Areas: Methodology Core (separate courses required)					
Epidemiology	HSCI 488 EOH 560	Epidemiology EOH Epidemiology	3	100%	Madison, Rosenblatt
Statistical Methods	HSCI 390, L	Biostatistics, lab	3	100%	Madison, Rosenblatt
Toxicology	EOH 456	Industrial Toxicology	3	100%	Machado

Foundation Areas: Related Areas (basic understanding required)					
Environmental Economics	EOH 352	Environmental Health Policy, Law, and Administration	3	20%	Seiver
Environmental Health Management	EOH 352	Environmental Health Policy, Law, and Administration	3	40%	Seiver
Environmental Law & Public Policy	EOH 352	Environmental Health Policy, Law, and Administration	3	40%	Seiver
Risk Assessment	EOH 469, EOH 356B EOH 456	EOH Risk Analysis Environmental Health II Industrial Toxicology	3 3 3	60% 30% 10%	Sullivan Hatfield Machado
Risk Communication	EOH 469, EOH 356A EOH 456	EOH Risk Analysis Environmental Health I Industrial Toxicology	3 3 3	40% 30% 30%	Sullivan Hatfield Machado

Environmental Health Programmatic Areas: (in-depth study in four areas/exposure to majority) ***Students must complete 15 units (5 courses) of EOH electives from the following list.***					
Accident Prevention	EOH 365	Accident Prevention	3	100%	Harmon
Air Quality	EOH 468	Air Pollution and Health	3	100%	Bellin
Environmental Chemistry	EOH 356B	Environmental Health II	3	30%	Hatfield
Environmental Epidemiology	EOH 560	EOH Epidemiology	3	100%	Sullivan
EH Law	EOH 454	EOH Law	3	100%	Harris
EH Planning	EOH 132	History of Preventative Medicine and Public Health	3	20%	Schillinger
Environmental Microbiology	EOH 455, 455L	Microbial Hazards in Environmental Health	3	100%	Schillinger
Food Protection	EOH 356A	Environmental Health I	3	30%	Hatfield
Global Env. Health	EOH 353	Global Environmental Health	3	100%	Hatfield
Housing	EOH 453	Health and Physical Aspects of Housing	3	100%	Seiver
Hazardous Materials	EOH 459	Hazardous Waste Management	3	100%	Machado
Hydrogeology	EOH 356B	Environmental Health II	3	20%	Hatfield
Industrial Hygiene	EOH 466B,L EOH 466C EOH 595 OE	Eval. the Occ. Env, + lab Ventilation Design and Noise Abatement Occupational Ergonomics	3 3 3	100% 100% 100%	Bellin
Injury Prevention	EOH 465	Occupational Safety	3	100%	Boxwell
Institutional Health	EOH 356A	Environmental Health I	3	10%	Hatfield

Noise Control	EOH 466C	Ventilation Design and Noise Abatement	3	50%	Kennedy
Occupational Health & Safety	EOH 466A	Occupational Health	3	100%	Bellin
Radiation Health	EOH 467	Radiological Health	3	100%	Mueller
Recreational EH	EOH 356A	Environmental Health I	3	10%	Hatfield
Soils	EOH 356B	Environmental Health II	3	20%	Hatfield
Solid Waste Management	EOH 356A	Environmental Health I	3	20%	Hatfield
Vector Control	EOH 458	Vector Control	3	100%	Schillinger
Wastewater	EOH 457	Water Supply and Sewage Disposal	3	100%	Machado
Water Quality	EOH 457	Water Supply and Sewage Disposal	3	100%	Machado
Water Supply	EOH 457	Water Supply and Sewage Disposal	3	100%	Machado

Field Experience and Problem-based Learning: (180-clock hours total)					
Field Experience	EOH 494B EOH 693A	Academic Internship Supervised Field Training	2 2	100%	Schillinger

Background Areas: Basic Sciences (same as offered to basic science majors; one-year biology including microbiology; one-year chemistry (general and organic) including laboratories; one-half year physics; one and one-half years of basic science electives)					
Biological Sciences	BIO 106/L BIO 107/L BIO 215 Or BIO 101 BIO 281, 282 EOH 455/L	Biological Principles I Biological Principles II Intro. Microbiology Or Introductory Biology Human Physiology, Lab Microbiological Hazards in Environmental Health		100%	Numerous
Chemistry (w/labs)	CHEM 103 CHEM 104 CHEM 235 Or CHEM 101/L CHEM 102/L CHEM 333 CHEM 334	Introductory Chemistry I Introductory Chemistry II Intro. Org. Chemistry Or General Chemistry I General Chemistry II Principles of Org. Chem. I Principles of Org. Chem. II		100%	Numerous
Physics	PHY 100A/L PHY 100B/L	General Physics I and Lab General Physics II and Lab		100%	Numerous
Math	MATH 105	Pre-Calculus		100%	Numerous

Background Areas: Communication (proficiency in oral and written communication)	
Oral communication	12 units of General Education Courses in the category "Basic Skills" (described on page 24 of the university catalog). Oral Communication is also addressed throughout the major.
Written communication	All students must meet the general education requirements of the university described on pages 24-31 of the university catalog. This includes: a **writing intensive** requirement as described on page 24: "All Upper Division GE courses are designated Writing Intensive (WI). Therefore, the WI requirement will be satisfied by meeting the Upper Division General Education requirement. Writing Intensive courses require students to complete writing assignments totaling a minimum of 2,500 words."

Background Areas: Computer Skills (proficiency in email, internet, word processing, data management programs0	
E-mail/Internet	**Computer and communication skills** are addressed in the Information Competency required in general education (described on page 24 of the university catalog), These skills are emphasized in many (if not most) of the major courses.
Word Processing	
Data Management	
Background Areas: General Education (University's general requirement must be satisfied in humanities and social sciences)	
Humanities	The required pattern of General Education consists of 48 units distributed among these areas: **Basic Skills**.....12 units • Analytical Reading and Expository **Writing** • Critical Thinking • Mathematics • Oral Communication **Subject Explorations:** • Natural Sciences .....8 units • **Arts and Humanities** .....6 units • **Social Sciences** .....6 units • Lifelong Learning .....3 units • Comparative Cultural Studies……...6 units • U.S. History and Government (Title 5).....6 units **Total Required General Education Units:.....48 units**
Social Sciences	
Background Areas: Electives (as necessary)	
	Students are required to take at least 15 units of electives in the major. Recent developments of "Plan R" for general education also increase the feasibility of completing a minor. We are encouraging students to consider Biology or Business as a minor, although minors are not required.

3. Course and Curriculum Evaluation

All courses and faculty are evaluated by students on an annual basis.
A standardized "Wilson Form" is used (see next page). For more information on this process, see "Evaluation of Faculty Performance" on p. 22.

The curriculum process for introducing new courses starts with review by the **department curriculum committee**. Their recommendations are forwarded to the **college curriculum committee** and then to the EPC (educational policies committee), which is the name for the **university level curriculum committee**. All departments are comprised of faculty elected by their peers.

The sequencing of courses is an important issue for students, especially working students who complete the degree over a longer time due to various responsibilities. A curriculum planning guide is shown on page 16. Also, different planning scenarios are show online at http://www.csun.edu/~vchsc00b/EOH/studyplans.htm .

All EOH courses are updated on an annual basis. Curriculum review is a continuous process with discussions held in program meetings on a regular basis.

4. Future Plans

We are currently in a recruitment mode, where we place some of our highest rated instructors in the general education courses. Our intent is to recruit more students in the major, and this is reflected in the extremely high student evaluations received by each of these instructors.

However, as enrollment approaches a higher and more stable number, we intend to place more of these instructors in various electives and seminars, and develop effective part-time instructors for the recruitment courses. This is part of a deliberate plan to place our highest priority on recruitment.

Figure 4: "Wilson Form" for Student Evaluation of Teaching

Students are asked to rate their instructors on a scale of 1-5, where:

- 5 is strongly agree,
- 3 is neutral, and
- 1 is strongly disagree.

The statements students respond to are as follow.

- Is punctual and professional
- Emphasizes conceptual understanding
- Discusses recent developments in the field
- Is careful and precise in answering questions
- Is well prepared
- Encourages academic achievement
- His/her knowledge of the subject is extensive
- Stress important points in lectures or discussions
- Explains clearly
- Discusses career opportunities in the field
- The students responsibilities in this class are made clear by the instructor
- The lectures provide a good basis for understanding the course material
- The basis for determining student grades is clearly explained
- Relates to students as individuals
- The assignments are fair and related to the course objectives
- The course is well organized
- Is available during office hours
- Discusses practical applications of course material
- The examinations fairly reflect the course material

Data analyses provide mean scores for each class, each instructor (including all their classes), and the entire department, along with a distribution chart of responses for each question.

We are generally a very highly rated department, but feedback from these surveys has influenced key decisions:

- Two part-time instructors have not been re-hired this year because of lower evaluations.
- Two of our highest rated faculty have been placed in general education courses to improve recruitment.
- While our lowest average is still very high (more than 4 out of a maximum 5), we will emphasize "Discusses career opportunities in the field" in the coming year.

Figure 5:

Curriculum Planning Guide for Undergraduate Environmental and Occupational Health (EOH) Majors.

The outline that follows is a suggested guide or model to aid EOH majors in selecting courses in a manner that will expedite their progress toward a B.S. degree. Because the academic backgrounds of students entering the EOH Program may vary significantly, advisement should be obtained at the earliest possible date.

First Year	
Fall	Spring
Biol. 106 (4) or 101 (4) Math 106 (5)[2] or 105 (5)[2] English 155 (3) Other G.E. Courses	Biol. 107 (4) or 281, 282 (4) Chem. 101 (5)[1] or 103 (4) HSci 132 (3) G.E. Courses
Second Year	
Fall	Spring
Physics 100A, AL (4) Chem 102 (5) or 104 (4) G.E. Course	Physics 100B, BL (4) Chem. 333 (4) or Chem 235 (4) HSci 390, 390L or other statistics class (3-1) G.E. Courses
Third Year	
Fall	Spring
HSci 356A (3) HSci 466A (3) HSci 455, L (4) (or other Microbiology)[3] G.E. or EOH Elective*	HSci 352 (3) HSci 356B (3) HSci 488 (3) HSci 456 (3) G.E. or EOH Elective*
Fourth Year	
Fall	Spring
HSCI 494B (2) G.E. and/or EOH Elective*	G.E. and/or EOH Electives*

*See an EOH advisor for the development of an option in industrial hygiene or community environmental health.

1. Requires a satisfactory score on the chemistry placement test.
2. Requires passing score on entry level mathematics (ELM) examination.
3. HSci 455L (4) may be used as an elective if a basic microbiology course has been completed.

D. Student Data

1. Current Enrollment:

Freshman Sophomore	18
Junior Senior	83
total	**101**

Access to individual records (by departments as well as individual students) is by way of DPS (Degree Progress Report) described at http://www.csun.edu/anr/dpr/index.html with a tutorial at http://www.csun.edu/anr/soc/solar/dpr.html formerly called DARS (Degree Audit Reporting System)

2. Number of Graduates in the past 6 years

Academic Year	**B.S.**	**M.S.**	**Total**
2000-2001	45	21	66
2001-2002	46	22	68
2002-2003	29	15	44
2003-2004	21	15	36
2004-2005	21	13	34
2005-2006	19	12	31

3. Employment Status of Graduates in the Last 2 Years

2003F		
Lilit	Arutyunyan	Environmental Health
Donald	Gaviola	L.A. County Env. Health
Ellie	Ghonsuli	U.S. Food and Drug Administration
Jennifer	Graham	Unknown
Anait	Kazaryan	L.A. County EH Division
James	Miller	USPHS
Christina	Simpson	Graduate Student, CSUN
Mychi	Tran	Environmental Health
Normita	Valenciano	L.A.U.S.D. Env. Hlth and Sfty
Jessica	Blake	City Hall for the City of Vernon
2003sp		
Melisa	Arganbright	3M Pharmaceuticals
Rosanna	Aspacio	3M Pharmaceuticals
Mara	Garong	Environmental Health
Teri	Jackson	Medtronic Minimed
Jason	Phillippe	Unilab (Quest Intl.)
Sarkis	Sarkisian	L.A.U.S.D. Env. Hlth and Sfty
Beno	Singh	Envirotech, Inc.
Jody	Van Leuven	Graduate Student, CSUN
Elaine	Del Castillo	Graduate Student, CSUN
Allan	Tan	Quest Intl.
2004F		
Melissa	Hernandez	Ventura County EH Div
David	Meyers	Unknown
Segismind	Wright	Cal OSHA
Josephine	Yousefan	Providence Med Care
Neil	Mansky	Graduate Student, CSUN
2004sp		
Veronica	Alvandian	Environmental Health
Lori	Elder	Medical Analysis Systems, Inc
Anush	Gambaryan	Environmental Health
Carlota	Garcia	Unilab
Jafer	Habib	Unknown
Randy	Mendez	Environmental Health
Asad	Noorzoy	Los Angles Co. Dept of Health Services
Jesse	Saavedra	Environmental Health
Steven	Vetrone	Greater L.A. Co. Vector Control District
Eldred	Vigilia	Unknown
Nicholas	Loebs	Graduate Student, CSUN
Soniahilda	Rodriguez	So. Cal. Gas Company
2004su		
Alex	Garcia	Graduate Student, CSUN
Jose	Morales	Providence Med Care
Princess	Quion	Environmental Health
2005F		

Karen	Kim	Antelope Valley Mosquito & Vestor Control
Jabez	Martinez	Cal. Tech
Samantha	Mollaun	3M Pharmaceuticals
Pablo	Poticar	Ventura County EH Div
Balbir	Singh	L.A. County EH Division
Kyoko	Yanagawa	CSUN EHS
2005sp		
Jesus	Almanza	Graduate school in physical therapy
Jessie	De La Cruz	San Bernardino Co. Hlth Dept.
Lana	Georges	Jet Propulsion Lab
Yasmin	Hussein	Graduate Student, CSUN
Angela	King	Thibiant Intl
Mark	Lawrence	Unknown
Nha Trang	Nguyen	L.A. County EH Division
Mauricio	Nunez	Ventura County EH Div
Nancy	Parast	Ventura County EH Div
Aarti	Patel	Jet Propulsion Lab
Jessica	Rodriguez	L.A. County EH Division
Courtney	Rose	Hughes Research Lab
Josefa	Silva	Ventura County EH Div
Pooja	Patel	L.A. County EH Division
Paolo	Quinto	L.A. County EH Division
Nicole	Grabowski	Lockheed Martin Aeronautics

4. Enrollment Trends

Undergraduate enrollments

Our enrollments are reported below using two different measures: total number of students, and full-time equivalent students (FTES). FTES is the total number of student credit hours divided by 12 (12 units is the load of fulltime students). The FTES more accurately reflects the contribution of full-time and part-time students to total enrollments, and it also accounts for the substantial contributions from students outside our major that enroll in our general education courses.

	2001	2002	2003	2004	2005	2006
Total Numbers	106	113	105	104	83	101
FTES	65	43	54	68	90	105

Projected enrollments: Total enrollments (including our g.e. courses) have increased in the last 5 years. Enrollments in the major have stabilized but our still low. Over the past 15 years, we have surveyed students we now have to gain insights on what are the most effective recruiting tools. We look to bolster our enrollments in several ways:

- We are emphasizing our general education course in environmental health (EOH 353) which has been successful in the past at recruiting students.
- We have introduced a lower division introductory course in environmental health (EOH 101).

After roughly 10 years of steady decline in enrollments, we have steadily increased total enrollments in the last 5 years.

5. Program Capacity

Despite the retirement of Dr. Kelly and the exit of Dr. Liu, program capacity is more than capable of handling increased enrollments. We are also hiring a new tenure track faculty member this year. Ideally, we prefer to **double** the current enrollments in the major, based on the history of the program. Should we be fortunate enough to surpass that number, we will be in a strong negotiating position to obtain additional resources as needed.

6. Integration of Graduate and Undergraduate Programs

A graduate program is also offered and is described in a separate accreditation self study. The 400 level electives are available to both graduate and undergraduate students, thus enhancing the integration of graduate and undergraduate programs. However, we add the requirement of separate and additional work for graduate students. While this work varies from course to course (as is appropriate), it typically calls for a writing assignment, which is consistent with the demands for greater technical writing and oral presentation skills within graduate programs.

E. Faculty

1. Program Faculty

Professor	Degree	Rank	Assignment	Status
Bellin	Ph.D. 1989	Prof.	466A,466B,466C,697, 693A, 699	F
Hatfield	Dr.P.H. 1985	Prof.	356A,356B,469,553, 554,555	F
Machado	Ph.D. 2000	Asst. Prof.	353,456,457,458,459, 554	F
Schillinger	Ph.D. 1982	Prof.	132,455,455L, 554,555	F
Seiver	D.P.A. 1991	Prof.	352,353,453, 457,494b	F
Mueller	M.S. 1992	Lecturer	467	P
Harris	J.D. 1995	Lecturer	454	P
Boxwell	M.S. 1979	Lecturer	365	P
Harmon	M.S. 2000	Lecturer	465	P
Oillataguerre	M.S. 1999	Lecturer	457	P
Alvord	M.S. 1997	Lecturer	353	P
Sullivan	Ph.D. 1985	Lecturer	469,553,555,560	P
Kennedy	Ph.D. 2000	Lecturer	466b,466c,554,555	P

Members of other programs also have teaching assignments in the required EOH courses. Dr. Madison teaches biostatistics and epidemiology and has a master's and doctoral degree in Environmental Health.

2. Teaching and Advisement Loads

University guidelines require a weighted teaching load of 15 units per semester. Three of these units are assigned to committee work and student advisement (which requires a minimum of 4 office hours per week). There are no guidelines for advisement loads (students per faculty member), which vary considerably among the academic programs. Each EOH program faculty member has a typical advisement load of about 30 student majors (i.e., graduate and undergraduate students).

3. Evaluation of Faculty Performance

Evaluation of teaching is actually a two-step process. First, faculty members are evaluated on a standardized "Wilson Form" by all students in each class on an annual or semi-annual basis (form described on page 15). Second, the Department Personnel Committee and Department Chair review in-class faculty performance as part of the promotion and personnel procedures of the University.

These forms are reviewed by the Department Chair, are available to the Dean of the School, and become part of each instructor's personnel file. The Department Personnel Committee also evaluates tenured full professors every five years (post-tenure review). The evaluation forms become part of the faculty member's personnel file. All non-tenured faculty receive peer evaluations annually.

Tenure track faculty members are evaluated through the RTP process (retention, tenure, and promotion). The University's procedures for evaluation of faculty competence and performance are documented in the California State University, Northridge Administrative Manual, Section 600 -- Academic Personnel Policies and Procedures. Sections 630 through 649 "Probation, Tenure and Promotion" delineate the step-by-step procedures that are to be followed.

To summarize that process, faculty members are evaluated by a department personnel committee and the department chair. These evaluations are forwarded to the college personnel committee and the dean for further review and recommendation. Evaluations are then sent to the University Provost for final decision of retention, tenure, and promotion. Appeals may be filed with the PP&R committee (personnel planning and review), which is the university personnel committee. All personnel committees are comprised of faculty elected by their peers.

4. Professional Activities

Active participation in professional organizations is required for promotion and tenure. All faculty are encouraged to be continuously involved in professional organizations at state, local, and national levels. The vita included in the appendix provide some documentation of the extensive professional activities within the EOH program.

5. Faculty Development

"Faculty Development" on our campus (formerly known as CELT) offers regular workshops on teaching. The University Technology Center provides an extensive set of computer program training workshops.

Monies are also available to support faculty participation in the academic programs of professional organizations. Extra support is provided to junior faculty to encourage scholarly activities such as presentations of research papers. We have also had success with online educational materials for faculty (as individuals and in groups).

F. Facilities and Resources

1. Oviatt Library

All library materials are housed in the Delmar T. Oviatt Library, a 234,712 square foot state-of-the-art facility. In 2006-2006 the library base budget was $7,373,085. Of note are the Collaboratory with its 170 multipurpose computer workstations, 3 computer equipped library instruction labs, and 120 computer workstations devoted to library information resources. There are over 1,600 seats for in house study. During Fall and Spring semesters, the building is open 90 hours a week. The Library maintains its own server and web pages providing access to electronic information 24 hours a day.

The Oviatt Library has a physical collection containing 1.3 million volumes, of which over one million are books, and over 240,000 bound periodical volumes. The Library subscribes to 20,000 online journals, 2,100 print journals, 200 online databases and 11,000 e-books. The microform collection contains 3.1 million pieces. There are over 11,600 sound recordings, 9,200 film and video recordings and nearly 60,000 pictures and other graphic materials. The archives and manuscript collection exceeds 4,000 linear feet of materials.

The Library is heavily used with 8.2 million uses of its web pages annually, a gate count of 1.4 million annually, and over half a million interactions per year with Library personnel. (for more information, see: **http://library.csun.edu/About_the_Library/**)

A high-density computerized storage retrieval system (the first of its kind in the United States) has been implemented and is online. A computerized catalog-circulation-serials-acquisition system has also been installed and is operational. Courses on electronic and internet access, and a variety of software programs are available at no cost to faculty. All faculty have personal computers in their offices with access to internet and Ethernet (used to access student files).

2. Computer and Internet resources

Information Technology Resources (ITR) provides access to centralized computing resources using state of the art equipment to support the computing needs of students, faculty, and staff. ITR is comprised of three major departments, which include Computing Services, the Office of Academic Technology (OAT), and the Technology Support Group (TSG). The University Catalog (pages 33-35) provides a description of the specific functions and resources that are available through these Departments to the University community. There are a variety of desktop computer labs available to students, faculty, and staff. These labs are located in a number of locations around the campus. Some of the major labs are described below.

Open Access Computer Labs

The Library manages the 3 campus open access computer labs; the two Sierra Hall labs (rooms 392 & 396) and the Library's Collaboratory. Lab Consultants are on duty at all times to provide help with using the hardware and software provided in the Labs. The use of these labs is subject to the University Policy for Use of Computing Resources.

The Collaboratory

Third floor, east wing, Oviatt Library.
168 PC-based workstations (30 Pentium II/450 systems, and 138 Celeron 466 systems).
All systems have a 100mb ZIP drive, and a CD ROM drive.
Software available includes MS Office 2000 (Word, Excel, Powerpoint, Front Page);
MS Internet Explorer (v5.5); Netscape (v4.7); CSUN's CBT courses;
SPSS (statistical package); FTP & telnet; Norton Anti-Virus; and various other utilities.
Access is available to all of the Library's Research
Resources, and to email using either Pine or Netscape. Printing requires use of a debit card which may be purchased at several locations in the Library.

Sierra Hall 396

12 Apple Macs (400 MHz PowerPC G4 w/1MB L2 Cache, 10GB hard drive,
Zip Drive, CDROM drive, VST USB Floppy Drive) Mac OS9, MS Office 98, Netscape Communicator 4.7, IE 5.0, NCSA Telnet, Fetch (FTP), Norton Utilities
An HP LaserJet is available for printing. A debit card is required.

Sierra Hall, room 392

40 PC-based workstations (Celeron 633 systems with 128mb memory, CD ROM drive and 100mb ZIP drive). Software available includes MS Office 2000 (Word, Excel, Powerpoint, Front Page); MS Internet Explorer (v5.5); Netscape (v4.7); CSUN's CBT courses; SPSS (statistical package); FTP & telnet; Norton Anti-Virus and various other utilities. Access is available to all of the Library's Research Resources, and to email using either Pine or Netscape. An HP LaserJet is available for printing. A debit card is required.

3. Laboratories

Four teaching laboratories have been set aside for exclusive use by the EOH Department: microbiology, housing, toxicology, and industrial hygiene. About $300,000 worth of equipment for the sampling and analysis of chemical, physical, and biological agents has already been provided. Monies for replacement and/or repair of lab equipment are provided annually. In addition, we anticipate substantial purchases of equipment and supplies for the new labs under funding referred to as "group 2 money" (in support of new labs). Also, instructional equipment funds are allocated each year within the college from lottery moneys provided by the state. The total value of all this equipment is anticipated to be roughly $500,000. Monies for replacement and/or repair of lab equipment are provided annually. Our existing equipment is listed below.

Microscopes, micrometers, sample slides, etc for light microscopy.
mini-Ram Portable Aerosol Monitor (1)
Marple Cascade Impactor (1)
Selection of personal sampling pumps (SKC, Gilian)
Baccharach TLV Sniffer (2)
Photovac Microtip (1)
Gas Sampling bags
Filter media (cyclones, IOM selectors, cassettes, etc)
Mercury Vapor Monitor (1)
Gas Tech Model 1238 Monitor (2)
Gas Tech Model 1341 Monitor (2)
MSA Model 40 Combustible Gas Indicator (3)
MSA Model 361 Multi Gas Meter (1)
Metrosonics AQ 502 (1)
Photovac QTRAK IAQ Monitor (1)
Draeger and Sensonics Colorimetric Indicators. (Several)
VICI Metronics Dynacalibrator Model 340-58-XD (1)
Photovac Model 10S Portable Gas Chromatograph (1)
Weston Illumination Meter
Narda 8200 Series Microwave Survey Meters (2)
Holaday Model HI 3002 Isotropic Broadband Field Strength Meter (1)
Tecktronix J16 Illumination Meter (2)
Blakray Ultraviolet radiation meter (1)
Audiometers (2)
DuPont MK3 and MK1 Audio Dosimeter (several)
RION Model NA-23 Sound Level Meter (2)
B&K Type 2209 Impulse Precision Sound Level Meter with Type 1613 Octave Filter Set (2)
General Radio Type 1562-A Sound Level Calibrator
WIBGET Monitors (2)
Portacount 5000 QNFT (1)
Selection of respirators
Thermoanenometers: Alnor Compuflow, Alnor Thermo-anenometer. (5)
Alnor Velometer (2)
Alnor Junior (2)
Alnor Balometer (1)
Benchtop Aerosol Chamber (1)

More recently acquired equipment is listed below:

1. **Sound Measuring Equipment**

   General Radio 1565-B Sound Level Metering Set (6)
   B & K Precision Sound Level Meters w/ Octave Band Filters (4)
   - Type 2209 / 1616
   - Type 2204 / 1613
   - Type 2209 / 1613
   - Type 2203 / 1613

   B & K Type 4226 Calibrator
   Quest Type Model 2800 Meter with Model OB-300 1/3 octave filter set (1)
   Quest Q-200 Dosimeter (2)
   Ametek MK-1 Dosimeters (5)
   Ametek MK – 3 Dosimeters (5)
   Rion NA – 23 Sound Level Meter (2)
   Metrosonics db-3100 Sound Level Meter (1)

2. **Direct Reading Instruments**

   Bacharach Mercury Sniffer (1)
   Bacharach TLV Sniffer (3)
   TSI Q-Trak Indoor Air Quality Monitor (1)
   Quest aq-5001 pro Indoor Air Quality Monitor (!)
   Gastechtor Model 1314 (5)
   Gastechtor Model 1238 (5)
   Hnu PI 101 Dectector (3)
   Photovac P100 Microtip (1)
   Riken Kikei GX – 91 Multigas meter (1)
   RAE Systems Multi RAE Plus (1)
   Crown Triple Plus + (1)
   Enmet Smart Logger (1)
   PE Photovac Voyager portable gas chromatograph (1)
   NITON XL – 300 XRF Lead Analyzer with soil, surface, and air sampling kits (1)
   Biotest APC Plus Airborne Particle Counter
   MIE pdr-1200 Particle Counter
   Metrosonics aq-502 Indoor Air Quality Monitor
   OVA – 128 FID (3)

3. **Ventilation Related**

   Alnor Balometer (1)
   Kurz 541 Mass Flow Meter (2)
   Kurz 1041 Velometer (2)
   Alnor Model 3363 Thermo – Anenometer (3)
   Alnor Model 8565 Compuflow (2)
   Alnor Velometer Junior (2)
   Alnor Model RV Velometer (1)
   Dwyer Pitot Tubes (2)
   Kurz Model 441S Velometer (1)
   Ventilation System (Demonstration and Calibration)

4. Air Sampling Pumps and Calibrators

SKC Aircheck Pumps (5)
Gilian HFS 513A Pumps (5)
Sensidyne BDX 44 Pumps (2)
Sipin Sp – 13 Pumps (4)
Mini-Buck Calibrators (4)
DC Lite Dry Cal calibrator (1)
Wet Test Meters (3)
Rotameters and burettes
Cyclones, 10m separators, etc

5. Nonionizing Radiation

Sper Scientiric Light meters (3)
Holaday Model 1501 Microwave Survey Meter
Holaday HI – 3603 VDT Survey Meter (1)
Holaday HI – 3002 Broadband Survey Meter (1)
International Light IL1400A Radiometer/Photometer with SEL240 sensor (ACGIH Actinic) (1)

6. Miscellaneous

Air-purifying respirators for demonstration of fit testing (20)
North 800 series SCBAs (3)
Scott Air Packs (2)
Selection of protective clothing, gloves, hearing protection and goggles
Benchtop Aerosol Test system (1)
Benchtop Ductless Laboratory Hood (1)
CAHN 26 Electrobalance (1)
Denver Instrument Systems A200DS top loading balance (1)
GST P4 2 GHz Desktop PC with Viewsonic 19 inch monitor (1)
VICI Instruments Model 340 Dynacalibrator (1)

Finally, the most recent purchases are listed below:

Air Compressor
Biological Safety Cabinet
Burner-Natural Gas Model
Carbon Monoxide Detective G120
Colony Count/ w /Register
Computers for Labs / Flatscreen
Denver Instrument M-310 Analytical Balance
Fiber Optic Scope
Fisher Hamilton SafeAire Class II Safety Cabinets
FisherBiotech Gel Drying System (w/vacuum & gel dryer)
Genesys 2 Spectrophotometer Package
Haake DC50-K35 Water Bath
Humidity-Temperature Meter w/Nist Certificate

Hydropro Telescopic Moisture Meter
IEC Benchtop Centrifuge Kit
IEC Micromax RF Microcentrifuge
Incubator
Isotemp Econ Lab Oven
Isotemp Safety Refrigerator/Freezer
Large Gel Electrophoresis System
Leica DC480 digital camera with video monitor
Leica MZ16 High Tech Stereomicroscope
Liquid Nitrogen Storage System: with Level Monitor
Mammalian Cell Tissue Culture Kit
Millipore Water purification system
Napco 7000 Series Water-Jacketed CO_2 Incubator
Specifications with dual chamber and TC sensor
New Brunswick C24 Incubator Shaker
Nikon Digital Color Camera System #97054
PCR Machine (Thermal Cycler) + Block
Plastic Carts
Precision Model 265 Water Bath
Protimeter Aquant Moisture Meter- M820
Refrigerator/ Freezer
Respirators
Revco Ultima II SI Series Ultralow-Temperature Freezer
Rollaway toolbox w/assorted tools
Smart Lab Upgrades
Stereomaster Zoom Microscope with Boom Stand
trinocular w/ fiber-optic ring
Teratological Chemicals Kit (Sigma/Marc)
Thermo 20 Transfer Vessel
Thermo E-C Apparatus Power Supply and Gel Kit
Laparotomy Kit
Davis Inotek Instruments/Concrete Moisture Meter
SKC West/Flow Check Airflow Indicator w/ampoules
United Industries/SCBA for Industrial Hygiene Lab

4. Instructional Facilities / Learning Aid Resources

The EOH Department is located in Jacaranda Hall at the northern portion of the main campus. The Department consists of fully dedicated classroom, laboratory, meeting room and office space. A complete array of learning aid resources are available to faculty. A resource room is available for the entire department, and additional materials may be obtained from Media Services at Oviatt Library.

The Learning Resource Center (LRC) is dedicated to the academic and personal success of CSUN students. It is committed to high quality services responsive to its diverse student population and to its local, national and global communities. The LRC's primary objectives are:

- To facilitate students' adaptation to college academics.
- To stimulate students' interest in developing learning strategies conducive to success.
- To create an intellectually stimulating environment and build a community of learners.

Writing Center Consultants are graduate students enrolled in the Master's in English program. They can help students with academic, professional and personal writing: reports, research papers, business letters, resumes, etc., as well as help students develop effective strategies for time management, reading, note-taking, and test taking. An appointment is necessary (818-677-2033)

5. Anticipated Changes

As mentioned earlier, we continue to upgrade our lab facilities. Also, grants from institutional donations have allowed us to hire a research assistant.

6. External Facilities/Agencies/Organizations

A fundamental part of our curriculum is the field experience (180 hours under EOH 494B). The extended Los Angeles metropolitan area provides our program with one of the most diverse population centers in the world. As a consequence, field training experiences and internships are available in a number of varied settings.

- Local government agencies, academic institutions, and private industries are used as sites for internships and student projects.
- After a student has completed the core environmental health courses, they can sign up for internships. The philosophy behind this requirement is that the students have a basic background in order to get the most understanding out of their internship. Exceptions may be made when appropriate to the student and the internship.
- Students indicate preferences for the type of internship, the times for the internship, and the location of the internship site (see Student Data Form on page 31). Every attempt is made to place the student in internships consistent with their preferences.

- Upon completion of the internship (minimum of 180 hours), students submit a summary of their internship.
- Preceptors are visited on a regular basis, both by phone interviews and site visits, for follow-up evaluation on internships.

Since our last accreditation, we have instituted the following **Internship Documentation Procedures:**

1. Students fill out an internship request form (see figure 7), indicating preferences for internship, location, etc.
2. After placement, records are filed on a semester basis and stored in the department office.
3. Records include: student name, organization name and location, preceptor's name and phone number, and a brief description of the type of internship.
4. Records must account for every student enrolled in each internship class.
5. Due to our obligations to preceptors, student internship papers will not be released for public review. However, they are available for review by the site visit team.

Preceptors are drawn from employers in the area, particularly from our alumni. Some major categories of preceptors include:

1. Local Environmental Health Agencies (**58 different local agencies** in California, with contact name and email, can be accessed at http://www.ccdeh.com/roster_2002.asp; the major counties in southern California are the most frequent choices).
2. State agencies such as the California Department of Toxic Substances, but many others in the California Department of Health Services and the California Environmental Protection Agency.
3. Local industries such as Boeing Corporation, Hughes Corporation, Texaco, and Chevron, and of course much smaller companies.
4. Environmental Health and Safety programs at universities, including our own and UCLA.

Figure 7

Environmental and Occupational Health Program
HSci 494B: Academic Internship
HSci 693A: Supervised Field Training

Student Data Form

This form is to be completed by all EOH majors seeking credit for a field experience program.

Student Name: _____

Phone Number(s): _____

Type of Internship Sought: _____

Geographical Area Sought: _____

Day(s) of Week Available: _____

Special Notes:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Figure 8:

INTERNSHIP PRECEPTORS 2001-2006

	Contact	Phone	Organization
1	Norton, Ron	818-677-2401	CSUN Health and Safety
2	Landon, Richard	213-896-7570	CA DHS, Med. Waste Management
3	Huff, Betty	805-654-2818	Ventura County
4	Smith, Randy	805-654-2816	Ventura County
5	Robert Mako	310-616-4296	Hughes
6	Sue Empey	310-317-5252	Hughes
7	Tom Ladwig	310-616-3544	Hughes
8	Seiden, Art	626-395-2425	Cal. Tech.
9	Basurto, Carl	818-902-2552	Superior Industries
11	Rehfield, Lisa	310-315-2286	Gillette
12	Honjio, Steve	562-949-7827	Cal-OSHA
13	Marie Edson	213-244-3284	Southern California Gas Company
14	Lyn Berman	213-244-3290	Southern California Gas Company
15	Lawrence Birkner	213-486-6076	Arco
16	Barbara Bleiler	818-586-4799	Boeing North America
17	Jay Brackensiek	626-358-2025	Jay C. Brackensiek and Associates
18	Carlos Buelina	310-416-5425	Volt Services Group
19	Sharon Callahan	310-816-8291	Arco Products
20	Barbara Knighton	818-458-5943	Dept. of Public Works
22	James Darnell	626-491-6691	Ultramar
23	Beth Darnell	714-222-1844	Montgomery Watson
24	Marj Drucker	310-372-8686	Drucker Health and Safety
25	Mark Duda	310-615-5243	Chevron Products
26	Victor Kennedy	310-825-4012	UCLA Medical Center
27	Diane Kobayashi	907-659-7812	Arco Alaska
28	Amy Lapin Posner	818-368-1302	Alpha Terapeutic Corp.
29	Jackie Luca	213-600-1396	Northrop Grummon
30	Lowell Moore	818-954-2890	Warner Brothers Safety
31	Pamela Persaud	213-586-3338	The Hon Company
32	Len Posner	818-709-3217	3M
33	Paul Shiroma	818-586-1199	Boeing-RocketDyne
34	Richard Warner	626-303-6842	Southern California Edison
35	Justine Lew Weinberg	213-237-5752	L.A. Times
36	Jeff Williams	310-855-4336	Cedars Sinai Medical Center
37	Thad Wolfe	213-644-0228	California Casualty
38	Chris Harden	818-908-5593	Anheuser Busch, Inc.

39	Socorro Cottle	310-527-3527	R.R. Donnelly and Son
40	Tom Hillis	310-647-4175	Raytheon
41	Henry Koyamatsu	818-354-2873	Jet Propulsion Laboratory
42	Sam Bellomo	818-902-4470	L.A. County De[t. of Health Services
43	Cathy Sinai	661-775-7050	District Safety Office, U.S. Postal Service
44	Jeanne Spivey	818-678-2284	Fadal Engineering
45	Larry Martinez	626-395-6727	CIT
46	Mike Shaw	562-944-9656	Greater L.A. Co. Vector Control District
47	Marie Edson	213-244-3284	Southern Ca. Gas Co.
48	Greg Smith	805-654-2823	Ventura County Env. Health Program
49	Terry Bednarczyk	818-354-0248	Jet Propulsion Laboratory
50	Sandra Landau	805-445-4082	Technicolor
51	Angello Bellomo	213-743-5086	LAUSD
52	Hassan Adan	213-576-7451	Cal-OSHA
53	James Matte	714-593-7155	Orange County Sanitation Districts
54	Maria Skewis	310-212-4512	Exxon Mobile
55	Wayne Tsuda	213-580-1068	L.A. Env. Affairs Office
56	Zareh Abramian	818-341-3060 x293	Banner Pharmcaps
57	Susan Shamban	818-885-8500 x4632	Northridge Medical Center
58	Mel Lim	626-744-6004	Pasadena Dept. of Public Health
59	David Greenwood	818-885-8500 x4646	Northridge Medical Center
60	Pam Manning	626-458-2151	L.A. County DPW
61	Alexander Kurman	805-388 7474	Vitess Semiconductor
62	Kathleen Yokota	714-484 5358	CA Dept. of Toxic Substances Control
63	John Porter	661-773-4537	L.A. County Dept. of Health Services

7. Advisory Committees

Representatives from government and industry are contacted on a regular basis for feedback on program graduates and the appropriateness of their academic preparation.

In addition, the program invites field practitioners every semester to give presentations to the Environmental and Occupational Health Students Association (EOHSA). Each speaker is encouraged to provide information on the academic preparation of EOH program majors. Visitations to field internship sites are also used to assess student preparation.

The Advisory Committee meets on an annual basis with the entire department. The Committee last met on May 5, 2006 on the campus of California State University, Northridge. The members of the Committee and their affiliations are listed below. The Committee has been active in the basic areas described in the EHAC criteria: 1) they provide insightful discussion on curriculum, 2) some members have played an active role in our internships, and 3) some members have provided funding or equipment to our program.

Angelo J. Bellomo, MS	Director, Office of Environmental Health & Safety; Los Angeles Unified School District
Dean Elliott, MS	Industrial Hygienist, Dept of Water & Power; City of Los Angeles
Paul M. Grier, REHS, MS	Department of Industrial Relations, Cal OSHA
Steve Honjio, MS	Department of Industrial Relations, Cal OSHA
Elizabeth Huff, REHS, MS	Community Services Manager; County of Ventura Environmental Health Division
Mark Katchen, CIH, MS	Managing Principal, The Phylmar Group, Inc.; Environmental Health & Safety Management
Brett Koontz, REHS, MS	Environmental Health Specialist City of Vernon Health & Environmental Control
Bill Kupfer, MS	Director, Environmental Health & Safety / Risk Mgmt; California State University, Channel Islands
Sandra C. Landau, CIH, MS	Environmental, Health, and Safety Manager - Technicolor, Inc.
Jackie Luca, CIH, MS	Director, Corporate Environmental, Health, & Safety; Northrop Grumman Corporation
Tony Luca, CIH, MS	Director, Safety, Health, and Environmental Affairs; Boeing Satellite Systems, Inc.
Villia Simpkins, REHS	County of Orange/Health Care Agency Environmental Health Division

G. Program Funding

1. State Funds

The primary funding for this university is through state funds, which has provided a relatively stable source of funding throughout our history. Resource allocation is a complex bureaucratic/political process in the California State University system. The allocation of financial resources begins as a political process in the state legislature and the governor's office as an item in the state budget. Funds are allocated by the state to the CSU system through the chancellor's office, which in turn allocates funds to each of the 23 CSU campuses. Each campus further allocates funds to its various academic schools or colleges, and the deans then allocate to departments. At the departmental level the final disbursement of funds is the ultimate responsibility of the Department Chair. A record of our department funds is shown on the next page.

2. Special funding

- Donations to the EOH Program Trust Fund from industries such as Lockheed, Hughes, Northrop, Exxon, and Aerojet General have provided additional support for teaching and research activities.
- State lottery funds are available each year for instructional equipment.
- Major funding for labs, referred to as “Group 2 funding.”
- MOU moneys (memorandum of understanding with the College of Extended Learning) is also available for our own departmental purposes.

Figure 9: Funds for the Department of Environmental and Occupational Health

	C S U State Accounts					Foundation	TOTALS
	GAD05	T496U Fund raising	T496U MOU (Ext Lrng)	Lottery L481U	Lab Accounts (GAD04)	Foundation Acct Fundraising A3485	Fund & Expense Balances
Revenue:	15,774.00	154.30	12,298.71	12,463.61	296.00	1,933.00	42,919.62
Contributions Revenue	0.00	0.00	0.00	0.00	0.00	1,200.00	1,200.00
Transfer-Group II/Prior yr carryover	11,983.10	0.00	0.00	394.56	0.00	0.00	12,377.66
Open University-Fall 05	0.00	0.00	3,885.00	0.00	0.00	0.00	3,885.00
Open University - 2 Years Alloc	0.00	0.00	18,704.00	0.00	0.00	0.00	0.00
Haz Waste Certificate	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lab Fees Fall 2005	186.00	0.00	0.00	0.00	0.00	0.00	0.00
Lab Fees Spring 06	110.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL INCOME	28,053.10	154.30	34,887.71	12,858.17	296.00	3,133.00	79,382.28
						1,212.50	Grad Asst
Expenses:						338.05	Adv Board
Special Pay	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Student Assistant	2,950.92	0.00	0.00	0.00	0.00	0.00	2,950.92
Workstudy Student (25% applied)	179.90	0.00	0.00	0.00	0.00	0.00	179.90
Supplies & Services	3,630.54	111.29	1,605.99	0.00	0.00	0.00	5,347.82
Classroom & lab materials	1,942.88	0.00	1,250.71	0.00	296.00	0.00	3,193.59
Books	74.82	0.00	(0.01)	0.00	0.00	0.00	74.81
Printing	2,056.75	0.00	14.06	0.00	0.00	0.00	2,070.81
Postage	50.70	0.00	0.00	0.00	0.00	0.00	50.70
Rental	0.00	0.00	515.66	0.00	0.00	0.00	515.66
Repairs & Maintenance	592.91	0.00	3,915.96	0.00	0.00	0.00	4,508.87
Membership/Accreditation	2,119.00	0.00	0.00	0.00	0.00	0.00	2,119.00
Conference Fees	450.00	0.00	0.00	0.00	0.00	0.00	450.00
Travel - In State	100.00	0.00	0.00	0.00	0.00	0.00	100.00
Travel -Out of State	1,150.00	0.00	0.00	0.00	0.00	0.00	1,150.00
Telephone Usage-Calling Costs	175.44	0.00	0.00	0.00	0.00	0.00	175.44
Moves. Adds, Changes	108.00	0.00	96.00	0.00	0.00	0.00	204.00
Telephone Voice Mail	288.00	0.00	0.00	0.00	0.00	0.00	288.00
Desk/Lap/Peripherals	0.00	0.00	849.68	0.00	0.00	0.00	849.68
Equipment <5K	11,983.12	0.00	284.00	0.00	0.00	0.00	12,267.12
Furniture	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Instr Equip<$5K	0.00	0.00	405.94	12,858.18	0.00	0.00	13,264.11
TOTAL EXPENSES	**27,852.98**	**111.29**	**8,937.99**	**12,858.18**	**296.00**	**1,550.55**	**49,760.43**
CURRENT BALANCE	**200.12**	**43.01**	**25,949.72**	**(0.00)**	**0.00**	**1,582.45**	**29,621.85**

H. Faculty / Administration Evaluation

1. Program Strengths

Teaching : The faculty have a fundamental interest in the quality of learning among our students. All of our faculty members are highly rated teachers who have an ongoing interest in the constant improvement of their teaching.

A common mission: there is a strong sense of a common mission within our program. We share a philosophy of preparing students for comprehensive field practice. Students are continually challenged to draw from basic and applied science courses and apply their knowledge and skills to innovative solutions to environmentally related problems.

Successful alumni: Our graduates have assumed leadership positions throughout government and industry. They are educated to manage EOH problems in an integrated and comprehensive way. Two of the first four recipients of the Distinguished Alumnus Award for the College of Health and Human Development were from the EOH program. By any fair measure of outcomes, our alumni are successful.

Departmental Status: Since our departmental status in 2002, it has been much easier to agree on department short term objectives, long range goals, and the allocation of scarce resources. The department is more easily administered and has achieved greater visibility within the college and university. This not only results in improved funding (e.g., equipment requests), but in the more strategic use of those funds.

2. Problem Areas

Enrollments: We experienced a drop in enrollments for over a decade. Fortunately, we are still one of the largest programs in the country and perhaps better able to survive such drops. While acknowledging that enrollment is a critical issue, we nevertheless have a long history of high student demand and are confident that we can recover from this national trend. Indeed, our enrollments appear to be growing again. Moreover, employment trends continue to indicate a tremendous need for our profession. A large alumni base (which comes from a history of high enrollments) and our location in a major metropolitan area provide a ready market for continuing education, fundraising, internships, and job placement.

Budgets : Like many universities across the nation, we have contended with severely reduced budgets. While this has been an issue in the past, there are reasons for optimism. For example, there is college and university support as demonstrated in at least four critical ways. First, budgets increased this year. Second, increased enrollments throughout the College of Health and Human Development have strengthened the college's relative position within the university, and proportionately more dollars have been allocated to the college. Indeed, the EOH Department received funding for a new tenure track faculty position. Third, we have received dramatically increased funding for lab equipment from the so-called "Group II" monies. Finally, increased total enrollments within the Department have strengthened our funding.

Administrative expertise: With Dennis Kelly's retirement, we lost over 30 years of administrative experience in the department. However, we planned for this transition, and it should be emphasized that four of our program faculty members (Bellin, Hatfield, Schillinger, and Seiver) have served as program director at different times. Furthermore, Dr. Bellin completed a 3 year term as chair, and serves as valued advisor on a wide range of administrative issues. In order to take full advantage of the broad spectrum of administrative expertise, the following strategies have been pursued:

- Rotating the position of chair among the senior faculty. The chair is reviewed every 3 years, and it is our expectation to rotate the position every 3 to 6 years.
- Sharing some of the administrative responsibilities of the chair across the department's upper level faculty.
- Participating in the numerous university forums that advance the skills of Department Chairs.

Research at a teaching institution : The central mission of our university is teaching, in contrast with R-1 institutions (i.e., comprehensive research universities). At CSUN, there is increased emphasis on teaching, advisement, and administrative duties, while there is relatively less emphasis on faculty research (although still quite significant). In this context, we view our increased publishing levels in recent years as a program strength -- we have learned the value of strategically managed collaborative research. Our professors have been substantially more productive than ever, particularly in the area of applied and policy research. We believe this is a demonstrated excellence for an institution whose primary mission is teaching. We are especially pleased that this seems to have translated to a stronger position within the university (i.e., the transition to departmental status and the refurbished labs).

3. Long-term Plans

We will remain committed to excellence in teaching and learning, to science-based training of environmental health practitioners, and to a passionate belief that environmental and occupational health professionals must prepare for managing the broadest range of physical, chemical and biological risks. More specifically, we have the following long-term goals:

- We hope to double our enrollments to help meet the tremendous need for environmental health professionals in our region. Such growth will bring with it the opportunity to expand the curriculum.
- With 4 of the 5 tenure track faculty in their 50's, we must plan on a ten-year transition from the current faculty to the faculty of the future. We have begun that process with the scheduled hiring of a new tenure track faculty member this year.
- We will continue to expand the activities of our labs, befitting the generous allocations we have received through "group II" funding at our university.
- We will continue to monitor the performance of our graduates as evidence for the need to modify our curriculum. This will be achieved through expanding our outcomes assessment process both here on campus and in the various professional settings where are students are placed and hired.

Official Signatures:

Thomas H. Hatfield — 12-11-06

Thomas H. Hatfield, Dr.P.H., R.E.H.S.
Chair, Department of Environmental and Occupational Health

Date

Helen M. Castillo — 12/12/06

Helen Castillo, Ph.D., R.N.
Dean, College of Health and Human Development

Date