Los Angeles Valley College
5800 Fulton Ave., Valley Glen, CA, 91401 (818) 947-2600

Program Review

Anthropology, Astronomy, Environmental Science, Geology, and Oceanography Programs

Earth Science and Anthropology Department

Spring 2009

Table of Contents

A.

Title Pages and Signatures

LOS ANGELES VALLEY COLLEGE

PROGRAM REVIEW SIGNATURE/TITLE PAGE

DISCIPLINES: Anthropology, Astronomy, Geology, Environmental Science, Oceanography

PROGRAM NAME: Earth Science and Anthropology

DEPARTMENT NAME: Earth Science and Anthropology

DATE of REVIEW: May 31, 2009

REVIEW COMMITTEE:

Department Chair and Program Review Chair: _____
Jacquelyn Hams

Program Review Committee Members:

1. David Falk _____

2. Meredith Leonard _____

3. Eugene Scott _____

4. Rebecca Stein _____

5. Joan Hackeling _____

Dean of Academic Affairs: _____
Deborah diCesare

Vice President of Academic Affairs: _____
Sandra Mayo

Academic Senate Representative: _____

B.

Executive Summary

Executive Summary

The Earth Science and Anthropology Department is a multi-disciplinary department focusing mainly on general education courses in the natural and social sciences. Our curriculum has grown over the last decade, partly aided by two departmental grants, one from NASA and one from the U.S. Department of Agriculture. In addition, two new programs, the AA degree in Anthropology and the Certificate in Scientific Visualization, were developed. The department offers several online courses, TAP, and VCAP sections and participates in service learning. All course and program SLOs have been written and the department has begun assessment.

Our students mirror the campus demographics, but tend to be more transfer-oriented. They are satisfied with our courses, scheduling, and instructors and find our courses useful and interesting. Our completion and success rates are also similar to those of the campus. Students are largely unaware of our program offerings and very few degrees and certificates are awarded by the department.

With the recent move of most of the department to the new Allied Health and Sciences Building, many of the facilities and equipment issues noted in our last program review have been addressed. However, new issues have arisen. The lack of classroom space in the building means that several of our classes remain in outdated facilities. The newer, "smart" classrooms often have equipment that does not function properly. Some additional equipment is still needed and the department needs to secure funding for maintaining and replacing equipment as necessary. The Astronomy discipline remains in the Planetarium, which received some refurbishing, but remains inadequate for instructional needs. In both locations, faculty need training in order to use the new technology and resources available to us.

The full-time faculty ratio in most disciplines is acceptable, with the exception of anthropology which remains understaffed. Student workers are also needed to help with the new laboratories and Planetarium.

Our connection to and use of campus resources is well established. The move to the new building provided a new and improved space for departmental tutoring, but that space lacks computers and needs additional hours. Although students are aware of the service and rate it very highly, it remains underutilized.

The department also has strong connections to outside resources which should be maintained and grown.

C.

Program Review

Jackie Hams (left), David Falk (center), and Meredith Leonard (right),
enjoy snacks after a Program Review editing session. Photograph by Rebecca Stein.

I. Introduction

This is an update to the Program Review for the Earth Science and Anthropology Department. During the last Program Review cycle the Earth Science and Anthropology Departments were not combined and submitted separate Program Review documents in 2001 and 2002 respectively (see appendix F). This combined report includes the following programs: Anthropology, Astronomy, Earth Science, Environmental Science, Geology and Oceanography.

The department has been able to address many issues raised in the last program reviews due to the move into a new facility and the ability to update computer and instructional laboratories with equipment as a result of bond measures. However, the faculty need technical and instructional assistance in order to teach using the technology that is very much a part of the departmental disciplines in the 21st century. New courses and degrees proposed in the last round of program review have been established, but the department still lacks full-time faculty members that were requested in the past.

II. History, Mission, and Philosophy of the Department and Programs

History – Earth Science A.S. Degree

The Earth Science A.S. degree has been awarded twice in the last ten years. One degree was offered in the 1999-2000 academic year and one was offered in the 2004-2005 academic year. The majority of the students who take classes leading to this degree are transfer students who do not seek an A.S. as a terminal degree, nor do they need it for transfer.

History - Anthropology

In its five decades at Valley College, anthropology has experienced periods of both growth and decline that have mirrored the highs and lows of district-wide enrollment. At its height in the 1970s, there were five full-time faculty and numerous adjunct. As enrollments began to drop in the 1980s, a trend which continued through the early 1990s, the department dwindled to just one full-time faculty member. At this time, we are seeing increases in enrollment and a greater demand for anthropology courses. The discipline currently has two full-time faculty members and eight adjuncts on the seniority list.

The curriculum offered during the history of the department has also increased or decreased in diversity along with enrollment trends. The department has just finished a period of increasing our course and degree offerings. Long-neglected classes like archaeology, gender studies, and native peoples were revived and new courses like medical anthropology and anthropological linguistics were added. There is now an AA degree in Anthropology for the first time. Online sections are also available now for four of our courses.

History - Astronomy

The core of the Astronomy program are an Introductory Astronomy course (Astronomy 1) and a laboratory course (Astronomy 5). In response to interest in the planets, a Planetary Science course was added to the department's offerings in 2007. Development of this new course was made possible through funding by a NASA Curriculum Improvement Partnership Award (CIPA) grant. Earth Science 4, Introduction to Planetary Science, was established in 2006 as result of the NASA CIPA grant. Demand for Astronomy courses remains strong. Astronomy courses are taught by one full-time faculty member and one primary adjunct instructor.

Supplemental presentations and Astronomical activities that support credit courses have been provided for the past 20 years by the LAVC Astronomy Group, which consists of students and community volunteers. This organization is sponsored by the Earth Science and Anthropology Department.

The past year (2008-2009) has witnessed financial challenges to the campus, resulting in the number of classes being reduced from nine to seven per semester. This has caused applications for enrollments to increase beyond Planetarium classroom capacity, while seating has decreased from 50 to 46 in the Planetarium classroom due to ADA requirements stemming from recent bond-funded remodeling. The planned addition to the Planetarium, a 100-seat capacity chamber, was twice put onto the "unfunded" list, leaving the Astronomy program unable to expand or even meet current demand.

History - Environmental Science

At the time of the last program review, only one course in Environmental Science was offered - Environmental Science 1: The Human Environment: Physical Processes. Since that time new courses have been added and a new full-time faculty member was hired. The discipline currently has one full-time faculty member, who also teaches Geography, and one adjunct.

Our department was awarded a $250,000.00 grant from the US Department of Agriculture-CSREES program in 2005. This grant, referred to as the WINGS (Water Improvement by the Next Generation of Scientists) Project was directed by Joan Hackeling, PhD, geography adjunct. The goals of WINGS were to: enhance science-based knowledge and education for the improved management of natural resources (water resources in particular) by our students, and recruit, educate, mentor, graduate and transfer underrepresented students in these areas of study.

WINGS funded the creation of one new course in the discipline – a 2-unit, UC-CSU transferable environmental science laboratory course (Environmental Science 22: the Human Environment Physical Processes Lab) in fall 2005. Environmental Science 1 is a co-requisite for that course. Although only one section of the lab course was offered initially, enrollment now supports the offering of two to three sections per semester. In addition, Environmental Science 7: Introduction to Environmental Geology (cross-listed as Geology 10), a 3-unit, UC-CSU transferable lecture course has been reinstated since the last Program Review. Additional courses in Environmental Science focusing on biological processes are offered in the Biology Department.

History - Geology and Oceanography

Geology and Oceanography enrollments at Los Angeles Valley College have shifted over the years. Geology majors were strong in the past and declined in the late 1970s. Geology classes such as Historical Geology, California Geology, and Mineralogy have been offered in the past for transfer majors, but have not been offered in many years. The Physical Geology lecture and laboratory courses and Environmental Geology (cross-listed with Environmental Science) are the only remaining geology classes offered each semester. The Geology enrollments can typically support one lecture and laboratory section of Physical Geology each semester. The department currently offers one online section of the Physical Geology lecture course.
The Oceanography lecture course has gained popularity and four to 5 sections are offered each semester including one online section. Oceanography enrollments can typically support one laboratory section each semester. One section of the Oceanography lecture course is offered in the online format.

Department Mission, Philosophy and Goals

The mission of the Earth Science and Anthropology Department is to provide instruction that emphasizes critical thinking and intellectual development while providing students with an understanding of and appreciation for the cultural, biological, and physical processes and diversity in the world as a whole and in their community in particular.

The department goals are categorized and outlined below.

Appreciation of Human Diversity Goals:

- to foster individual and group understanding through the study of cultural diversity by exposing students to the cultures of the world thereby increasing their sensitivity to cultural differences and similarities
- to promote understanding of diverse cultural environments that surround the college through direct studies and participation in various cultural activities of a diverse nature, i.e., active participant observation of surrounding communities
- to promote understanding of the nature of human biological diversity, its evolutionary background, and its modern implications

Earth Sciences Goals:

- to promote understanding of physical processes in the environment and in the universe
- to foster an appreciation for the environment and the impact of humans on the environment

Critical Thinking and Information Competency Goals:

- to encourage critical thinking through the use of culturally relative comparisons of diverse ways of life and ways of thinking
- to encourage the understanding and appreciation of human physical diversity through the study of human genetics and human evolution

- to promote the methods of scientific inquiry as a means of understanding the world around us
- to encourage information competency, including evaluating resources and information

Transfer Education Goals:

- to provide an AA degree program in anthropology, earth science and geography
- to promote excellence by offering Honors Classes
- to provide courses that meet a wide variety of general education requirements

Occupational Goals:

- to provide students with a background in cultural diversity that will better enable them to compete for a wide variety of jobs in the global market as well as interact effectively in today's culturally diverse business community.
- to offer certificates in GIS and Scientific Visualization

General Education Goals:

- to provide courses in a wide variety of general education areas
- to encourage student attainment of the college's general education student learning outcomes
- to promote a deeper understanding of earth and human cultural systems and an appreciation for the interactions among them
- to encourage active engagement and ethical decision making in regards to the environmental, scientific, and societal issues

Instructional Goals:

- to provide students with the most pedagogically sound methods of instruction, including the use of technology
- to provide students with the most current information available by means of the active field work research and professional involvements of the department faculty
- to improve teaching and learning through the implementation of the student learning outcomes assessment cycle
- to provide students with current information by means of guest speakers brought to the campus
- to promote understanding of research methods through "hands-on" laboratory classes.

III. Program Description

A. Curriculum

Anthropology

Anthropology is a diverse discipline that offers courses that satisfy general education requirements in the natural sciences, social and behavioral sciences and humanities. In the natural sciences area, we offer Anthropology 101: Human Biological Evolution. Anthropology 111: Laboratory in Human Biological Evolution fulfills the natural science laboratory requirement. For the social science requirement we offer Anthropology 102: Human Ways of Life, Anthropology 103: Archaeology: Reconstructing the Human Past, Anthropology 104: Human Language and Culture, Anthropology 109: Gender, Sex and Culture, Anthropology 110: Food and Culture and Anthropology 141: Medical Anthropology. In the humanities area, we offer Anthropology 121: Magic, Witchcraft and Religion. All of our courses are CSU transferable and all but Anthropology 110 are UC transferable.

Last year, we achieved the goal set in our last program review to develop the curriculum and get state approval for an AA degree in Anthropology. The degree consists of core classes in each of the four subfields (Anthropology 101, 102, 103, 104) that meet the lower division transfer requirements at several transfer institutions, the Anthropology lab, in addition to elective units. With the establishment of the AA degree and the new state rule to not transcript low-unit certificates, we plan to phase out the Cultural Competency certificate program.

At this point we plan to focus on building enrollment and recruiting for the AA program and plan to limit the development of new courses. If additional courses are added, they will be in the area of biological anthropology. Potential new courses include a laboratory in Forensic Anthropology (already offered in the District) or a course focused on primates.

Astronomy

The Astronomy program provides courses that meet general education requirements for transfer (Physical Sciences) to UC and CSU institutions, as well as Associate degree programs offered by Los Angeles Valley College (Natural Sciences).

Astronomy 1: Elementary Astronomy, surveys they entire field of Astronomy. Astronomy 5: Fundamentals of Astronomy Laboratory, satisfies transfer requirements for a correlating laboratory course.

Astronomy 12 (cross-listed as Earth Science 10): Scientific Visualization is a part of a Skills Certificate in Scientific Visualization, conducted in partnership with the Media Arts department. The Skills Certificate Scientific Visualization was established in 2006 as a result of a NASA Grant, the Curriculum Improvement Partnership Award. This certificate provides students with a varied background to communicate scientific concepts. Courses offered by the Earth Science and Anthropology and the Media Arts departments include Scientific Visualization, Recording

Arts Workshop and Introduction to Image Creation. Graduates of this Certificate would apply their skills in the aerospace, education, and computer industries.

Earth Science 4: Introduction to Planetary Science was also established in 2006 as result of the NASA CIPA grant. It examines processes that formed and modify the terrestrial planets. Given the current (2008-2009 academic year) financial situation, the Astronomy program is focusing on offering high-enrollment transfer courses, which are Astronomy 1 and 5. The Planetary Science and Scientific Visualization courses may be offered once finances permit, and new courses may be developed in the future based on demand.

Environmental Science

Environmental Science offers courses that satisfy general education UC-CSU transfer requirements in the physical sciences. These include Environmental Science 1: the Human Environment: Physical Processes, and the newly created compliment to that course, Environmental Science 22: the Human Environment: Physical Processes Laboratory, first offered fall 2005. Environmental Science 7 (cross-listed as Geology 10) is a lecture course introducing environmental geology.

When asked which skills and abilities they are most looking for in entry-level hires, WINGS grant advisory board members provided clear feedback. They seek employees with an academic background in the natural/physical sciences (a representative from one public agency stated that his agency's experience with social science students was that they were ill-prepared for the scientific rigors of jobs at his agency). Board members want employees with hands-on experience in environmental monitoring (air and water quality monitoring equipment, specifically), familiarity with environmental policy (e.g. California Environmental Quality Act/CEQA and National Environmental Policy Act/NEPA), sustainable development, urban planning (e.g. Smart Growth and Leadership in Energy and Environmental Design/LEED), and Geographic Information Systems (GIS).

Through the grant, we were able to purchase monitoring equipment that is being put to use in ES 22. Within the next five years, we would like to develop new curriculum to address advisory board comments and job market needs. We would like to develop an environmental policy and planning course (making sure to address the growing areas of Sustainable Design and LEED), and explore opportunities to partner with local agencies and universities (example: Department of Water and Power and California State University Northridge, respectively) to get students hands-on experience in environmental fields (water quality training and field trips with the DWP; GIS workshops with CSUN). We would like to develop GIS learning modules for use in environmental science courses and related disciplines with the intention of growing student interest in the field and increasing enrollments.

Geology

The Geology lecture and Laboratory courses satisfy the general education requirements for transfer to the UC-CSU system in the physical sciences. The Physical and Environmental Geology courses are core class requirements for the A.S. degree in Earth Sciences.

Geology 1, Physical Geology, is a detailed study of the origin and composition of the earth, the processes acting to modify the earth's surface, and the phenomena that catastrophically affect humans and their environment such as volcanoes, earthquakes, landslides, and floods. Geology 6, Physical Geology Laboratory, is the laboratory course for Physical Geology. Students complete geologic laboratory activities related to minerals, rocks, earthquakes, volcanoes, landforms, and map and aerial photograph interpretation. Field trips to local areas of interest are offered.

Geology 10, Environmental Geology, is cross listed as Environmental Science 7. This course examines the interrelationships between humans and the environment and includes a review of natural processes and their effects.

Oceanography

The Oceanography lecture and Laboratory courses satisfy the general education requirements for transfer to the UC-CSU system in the physical sciences. Oceanography 1 is a core class requirement for the A.S. degree in Earth Sciences.

Oceanography 1, Introduction to Oceanography, covers the major physical, chemical, and geological features of the oceans, and the oceans role in climate variability, earth history, and environmental issues.

Oceanography 10, Physical Oceanography Laboratory, is the laboratory course that accompanies the Oceanography 1 lecture course. This course employs a hands-on approach to familiarize students with the acquisition, processing, visualization and interpretation of different types of oceanographic data. A field trip is offered for this course.

For the future, we will continue to grow enrollments for Planetary Science.

TAP, VCAP, ACE and Service Learning

The department has worked with the Transfer Alliance Program to offer honors sections of the following courses: Anthropology 101, 102, 103, 109, 121, 141; Astronomy 1; Environmental Science 1. The department has also worked with the Valley College Accelerated Program offering short-term and late-start evening and weekend courses in the following disciplines: Anthropology, Astronomy, and Environmental Science. Service learning has also been offered to students through the department, offering them enhanced opportunities for field observation while “giving back” to their communities.

Online and Hybrid Sections

The department offers the following courses in online or hybrid format:

- Anthropology 101, 102, 103, 141
- Geography 1
- Geology 1
- Oceanography 1, 10

B. Student Learning Outcomes for the Programs

Anthropology

Course and program SLOs have been established for all of anthropology. All of the cultural courses have one cultural relativism outcome (students will be able to discuss other cultures in a non-ethnocentric manner) and an anthropological perspective outcome (students will be able to evaluate cultural behaviors using basic anthropological concepts and theories). The biological courses outcomes focus on students' ability to analyze human anatomy and behavior from an evolutionary perspective.

The program outcomes for the AA degree are:

- Students will be able to summarize the nature of the four specialized fields within anthropology (archaeology, biological anthropology, anthropological linguistics, and cultural anthropology), and explain how these interrelate to provide a holistic approach to understanding human differences and similarities across the world and through time.
- Students will be able to discuss other cultures in a non-ethnocentric manner.
- Students will be able to successfully transfer to a B.A. program in Anthropology.

Anthropology courses all involve the college-wide outcomes of reasoning skills, communication skills, global awareness and social responsibility/personal development. The SLO assessments all require the use of critical thinking and writing skills. For example, all of the cultural classes require primary research (a field assignment) and a written analysis. The entire discipline is focused on global awareness, in particular on cultural and natural processes. The focus on cultural competency will aid students in achieving the social responsibility/personal development outcome's emphasis on "participating actively in a diverse society."

A pilot SLO assessment of Anthropology 101 was conducted in Fall 2008 and an assessment of Anthropology 121 will be conducted in Spring 2009.These two classes constitute the majority of our course enrollments. Anthropology 111, the lab course, will be assessed in Fall 2009. In the coming year, we plan to focus on meetings of individuals teaching each course to review assessment results, plan improvement and share best practices for teaching that material. In particular, we need to focus on the laboratory course given the recent move to new facilities and the acquisition of much new equipment.

Astronomy

SLOs for astronomy courses have been established. The lecture courses focus on methods used to explore the universe and the scientific method. For the laboratory courses, SLOs include understanding the operation of telescopes and other scientific equipment, being able to analyze data from charts and images, and using star charts to identify objects in the sky. An SLO assessment plan is in process.

Environmental Science

SLOs for the Environmental Science lecture and laboratory courses have been established. In lecture, students will critically evaluate arguments regarding environmental issues. In laboratory students will use the scientific process to analyze human impact on the environment. An assessment for the lecture outcome is scheduled for spring 2009.

Environmental Geology/Environmental Science

The SLO for Environmental Geology, which is cross listed with Environmental Science, has been established. Students will be able to identify the natural and anthropogenic hazards in the environment.

Geology

SLOs for the Physical Geology lecture and laboratory courses have been established. An assessment for the Physical Geology lecture outcomes is scheduled for spring 2009. Students will be able to apply the scientific method to problem-solving in the geologic environment and evaluate issues related to geology that impact society and planet Earth in the Physical Geology lecture course. The laboratory course outcome is that students can apply scientific principals to examine, analyze, and compare different rocks, minerals, maps, cross-sections and other geologic data.

Oceanography

SLOs for the Oceanography lecture and laboratory courses have been established. An assessment for the Physical Geology lecture outcomes is scheduled for fall 2009. Students in the lecture course will be able to apply the scientific method to problem-solving in the oceanographic environment and effectively integrate the concepts from physical, chemical, biological, and geological oceanography to show how the earth works as a system. The laboratory course outcome is that students can apply scientific principals to examine, analyze, and compare seafloor topography, ocean chemistry, atmospheric-ocean interaction, ocean circulation, productivity and other oceanographic data.

Earth Science AS Degree Program

The A.S. degree is awarded to students whose majors are in the areas of physical, earth, and applied sciences or specialized technical areas. The program outcomes for the Earth Science A.S. degree are:

- Students will be able to successfully transfer to a B.S. program in one of the Earth or Physical Sciences.
- Students will be able to apply the scientific inquiry process to problem solving.
- Students will be able to demonstrate knowledge of and recognize the processes that explain natural phenomena.

C. Students

Very little change in student profiles was noted in the surveys over the past five years. Our students remain more transfer-oriented than the college population as a whole (52% of the students enrolled in the ESA Department plan to transfer to four-year institutions, as compared with 38% of the students at Valley College in general). However, they are no more certain of their career goals (18% of the students in the department are undecided in their career goals compared to 16% at LAVC in general). Our students are similar to the college as a whole in terms of their other goals: 21% of the students in the ESA Department and 29% of the students at LAVC are taking classes for vocational/job-related reasons; 5% of the ESA students and 7% of the LAVC students plan to obtain an Associate Degree; 5% of students taking classes in the ESA Department and 10% of LAVC students are taking classes for personal development.

Our student demographics are also comparable to the college as a whole. Our students are younger, on average, but have a similar distribution of ethnicity and gender.

42% of the students in the ESA Department are male compared to 40% in the general LAVC population. 58% of the ESA Department students are female, as compared with 60% at LAVC. 40% of the students in the ESA Department are Hispanic (40% at LAVC); 38% are White (35% at LAVC); 9% are Asian (13% at LAVC); 7% are African-American (7% at LAVC); and 6% are Other non-White (5% at LAVC).

The age comparisons for the ESA Department and LAVC are provided in the tables below.

Age	ESA	LAVC
Under 20	34%	24%
20-24	43%	33%
25-34	16%	22%
35-54	7%	18%
55 & over	1%	3%

The retention rate for students in the ESA Department is 86% and compares favorably with the LAVC rate of 85%. The success rate is comparable to that of LAVC in general (62% vs. 65% in 2005).

The results of a student survey conducted in 2007 by our department show that most students take our classes to fulfill a GE requirement (41%) or because of interest in the subject matter (41%). The students find our classes useful to their lives (86%) and future careers (66%). In the comments section, several students mentioned that they did not rate the classes as useful to their careers because they have not yet decided on one. Most of our students have transfer as a goal (70%) or plan to earn an AA degree (21%). Compared to other classes on campus, students find our classes more (59%) or equally (36%) as interesting. Most students (73%) state

that the class encouraged them to take more courses in the department. Almost all students (95%) use the Internet and 42% report an interest in taking online classes.

Students are largely satisfied with the course offerings and schedule (91%), their experiences with the department (95%), and their overall educational experiences at the college (91%). Student comments about the department and its instructors are very positive. Selected quotes are presented below:

> "I get to have educational discussions on Astronomy now."
>
> "The classes should offer more rigorous work to better prepare future science students."
>
> "I am more alert of what is going on in the environment/around the world and I can do my part to help."
>
> "Great class. Great teacher. Actually taught something. Easy to attend. Easy to learn because of good notes given by professor."
>
> "Much better than other colleges. I was very pleased LAVC has a planetarium."
>
> "….The department has more resources than I thought."
>
> "They are cool classes to take. They are interesting and the instructors are cool. I also enjoy the planetarium shows. Expect me next semester."
>
> “These classes have allowed me to be more open-minded about different topics that people discuss.”
>
> “Many things I learned kind of changed me.”
>
> “Explained things I did not realize.”

Students were pleased with the tutoring services offered by our department as noted in the comments below.

> "I took classes in both departments this semester and was pleased with both. Environmental tutoring was very helpful."
>
> "It is a friendly department where I as a student feel confident because staff/tutoring department help very well and prepared me for my exams (anytime)."
>
> "I truly enjoyed coming to class. Professor has gone beyond my expectations. She is very prepared and professional. The department has been very supportive of me as I approached this class with lots of information and concepts. The SI leader has been of great help and so has the tutoring department. I would not have made it without them.

> “The staff in this department loves their profession and love the subject that they teach. I’m truly grateful for all the knowledge that was shared with me."

Two areas of concern in the survey are departmental programs (degrees and certificates) and use of tutoring. Students are generally unaware of the programs offered through the department (ranging from 8 to 12 % of students aware) and very few degrees or certificates are actually awarded. While students are generally aware (81%) of the ES&A Tutoring, only 35% have actually used the service. Of those who have used it, though, they are overwhelmingly satisfied (97%) with the help they received.

D. Faculty and Staff

Anthropology Instructors

Eugene Sky Scott has been teaching at the community college level since 1995, most recently at Fullerton College, Riverside Community College and the South Orange County Community College District. He joined the Anthropology faculty at Los Angeles Valley College in 2001. Mr. Scott received a bachelor's degree in Education from the University of La Verne and a master's degree in Anthropology from California State University at Fullerton, where he was the recipient of several awards including the International Society for Trans-Oceanic Research Award and a California State University Pre-Doctoral Fellowship. His master's research was an ethnographic study of the Native Hawaiian Sovereignty Movement. Mr. Scott has also worked as an archivist at the Bowers Museum of Cultural Art.

Mr. Scott teaches Cultural and Archaeological Anthropology, Anthropology of Religion, and the Native Peoples of North America course. He is active in many additional activities, including presentations at professional meetings, involvement in local community and cultural events and participating in archaeological digs in the East Mojave.

Rebecca Stein and Eugene Scott in the display case for skeletons in the Anthropology lab.

Rebecca Lynne Stein has been teaching with the Los Angeles Community College District since 1995 at various colleges and joined the Anthropology faculty at Los Angeles Valley College in 2000. Ms. Stein received a bachelor's and master's degree in Anthropology from the University of California at Los Angeles, where she received a National Merit Scholarship. Her work has been focused in cultural and psychological anthropology, specifically concerned with child-rearing, transmitting values to children, deviance, gender and religion. She also has an interest in human biological evolution, particularly in the fields of genetics and the new field of Darwinian Psychology.

Ms. Stein has taught courses in Physical Anthropology, Cultural Anthropology, Anthropology of Religion, Anthropology of Gender and Sex, Food and Culture, and Medical Anthropology. Included in this has been the development of online courses. Ms. Stein has published a textbook on the anthropology of religion, published by Pearson, and a workbook in physical anthropology, published by McGraw Hill.

Ms. Stein is Program Chair for the Society for Anthropology in Community Colleges and actively participates in STARS events and distance education training. As SLO Coordinator, she frequently attends trainings on student learning and assessment techniques.

Adjunct Faculty on the department seniority list currently includes Burt Siskin, Leanna Wolfe, Christian Hammons, Mark Gordon, Toni Edge, Eleanor Strauss, Michelle Raleigh and Paul McDowell.

Astronomy Instructors

David Falk has been a full-time Instructor of Astronomy and Planetarium Director at Los Angeles Valley College for 12 years. He has taught courses Introductory Astronomy, Observational Astronomy Laboratory, Planetary Science, and Introductory Electronics. He holds a Bachelor of Science degree in Business Administration from California State University, Northridge, and an Associate of Science degree in Electronics from Los Angeles Valley College.

David Falk

As Planetarium Director, he oversees the operation and maintenance of the SciDome Digital Planetarium Projector within a 46-seat Planetarium, eight Celestron telescopes, and the Observatory's 16-inch Celestron telescope, as well as ancillary equipment. He was co-principal investigator in 2003 on a NASA Curriculum Improvement Partnership Award grant, which funded development of a Planetary Science course and the purchase of the SciDome digital planetarium projection system.

In addition, he is the Faculty Liaison to the LAVC Astronomy Group, a community-based volunteer association that provides opportunities for activities in Astronomy for students and the public. This Group is unique in that it sponsors public planetarium shows, star parties and lectures to enhance credit astronomy courses and the community.

Mr. Falk is a member of the Pacific and International Planetarium Societies. He has served on panel discussions and chaired roundtables on the uses of planetarium in astronomy education for the Pacific Planetarium Association and the Astronomical Society of the Pacific.

The adjunct faculty member currently on the department seniority list is Hal Jandorf.

Environmental Science Instructors

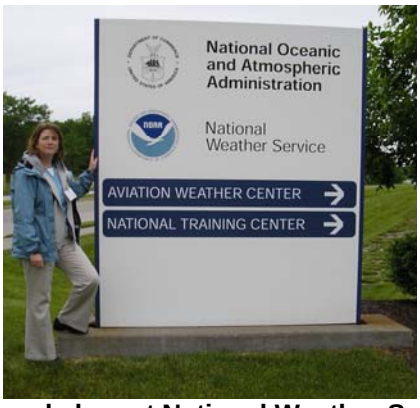
Since 2002 Meredith L. Leonard has been teaching environmental and geography courses at various institutions including California State University Northridge, Antelope Valley College, Ventura, Oxnard and Santa Monica Colleges. She joined the faculty at Los Angeles Valley College in fall 2005 as part of Valley College's long-term institutional commitment to its WINGS (Water Improvement by the Next Generation of Scientists) USDA-CSREES Project. The goals of which were to: enhance science-based knowledge and education for the improved management of natural resources (water resources in particular) by our students, and recruit, educate, mentor, graduate and transfer underrepresented students in these areas of study.

Meredith Leonard

Ms. Leonard received a bachelor's degree in Geography (ecosystems emphasis) from the University of California Los Angeles and a master's degree in Geography from California State University Northridge where she was the recipient of the Robert and Karen Newcomb Graduate Fellowship for her research on the ecological criteria for dam removal. Ms. Leonard has also worked as a Geographic Information Systems technician with the Los Angeles Regional Water Quality Control Board and US Fish & Wildlife Service.

Ms. Leonard teaches various Environmental Science courses with a physical process emphasis, Environmental Studies, Physical Geography, Meteorology, and Geographic Information Systems. Under the WINGS grant, Ms. Leonard served as an Educational Project Associate. She is the acting Faculty Coordinator of the Department Tutoring Laboratory, sits on various committees (environmental sub-committee chairperson for the Space & Work Campus Shared

Governance Committee; tutoring committee, campus and district sustainability committees), has been faculty advisor to three student environmental clubs on campus including the first community college chapter of the National Hispanic Environmental Council, and is the on-campus faculty liaison for Sustainable Works, a student workshop promoting sustainable practices in the urban environment.

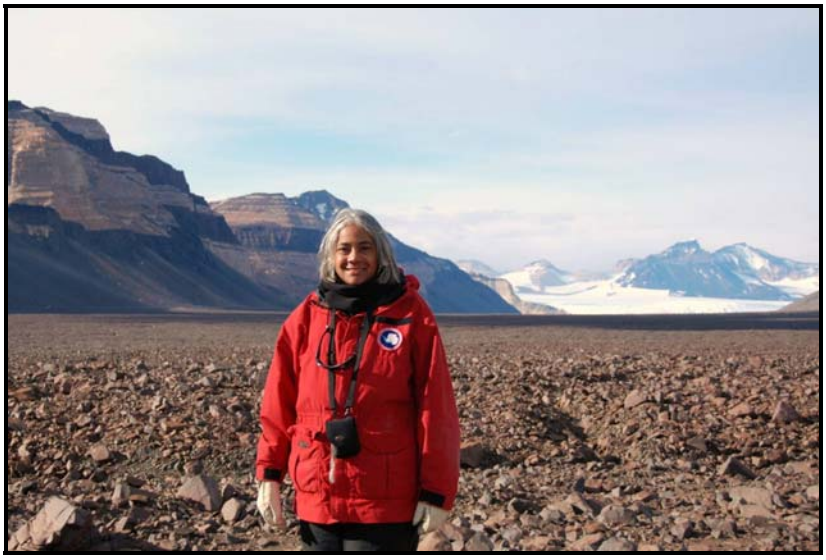


Meredith Leonard attends week-long workshop at National Weather Service Training Facility in Kansas City.

The current adjunct faculty member on the department seniority list is George Leddy, Ph.D.

Earth Science Instructors

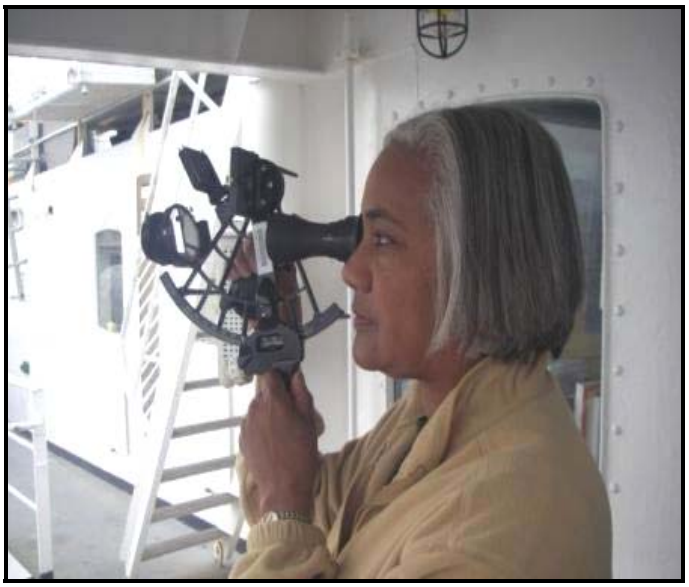
Jacquelyn Hams began teaching at Los Angeles Valley College in 2000 and is currently Associate Professor of Earth Science and the Department Chair of Earth Science and Anthropology. She began teaching Oceanography and Geology at California State University Los Angeles and various community colleges as an adjunct in1994 while still employed in the private sector. Her experience in the private sector includes work as a Petroleum Geologist and Environmental Consultant.



Jacquelyn Hams in Beacon Valley, Antarctica

Ms. Hams has a M.S. degree in Geology from California State University Los Angeles and teaches Physical Geology, Oceanography, and Environmental Geology lecture and laboratory courses in the traditional, hybrid, and online formats. She is a member of the Geological Society of America, National Association of Geoscience Teachers, American Geophysical Union, and the Oceanography Society.

She was a Co-Principal Investigator (with David Falk) for a NASA Curriculum Improvement Partnership Award Grant titled “Curricula Upgrade and Science Facilities Improvement Project” from 2003-2006. Ms. Hams regularly participates in teacher research programs that pair cutting edge researchers with teachers as a pathway to improving science education. She was a NOAA Teacher at Sea aboard the NOAA Ship RAINIER in a seafloor mapping project in the Aleutian Islands during the summer of 2006. From November-December 2008, she was a PolarTREC teacher and accompanied researcher David Marchant of Boston University to the Dry Valleys regional of Antarctica to sample and age date ancient buried glacial ice.



NOAA Teacher at Sea Jacquelyn Hams using a sextant aboard the NOAA Ship RAINIER in the Aleutian Islands, Alaska.

Ms. Hams currently serves on the District Instructional Student Services and Technology Committee and the Los Angeles Valley College Technology Committee. She has attended workshops on teaching Online Ocean Studies offered by the American Meteorological Society, as has served as a grant reviewer for the National Science Foundation Geosciences Division. Ms. Hams was the recipient of the National Association of Geoscience Teachers Dorothy Stout Professional Development Grant for a community college instructor to assist in field work.

The current adjunct faculty member on the department seniority list is Mussie Okbamichael, Ph.D.

Department Adjunct Representative

Joan Hackeling is an Adjunct Geography Instructor in the Earth Science & Anthropology Departments at Los Angeles Valley College and Santa Monica College. She is the adjunct faculty representative for the ESA Department at Los Angeles Valley College. Joan received her B.A. degree from Bucknell University in Lewisburg, Pennsylvania and her M.A. and Ph.D. degrees in Geography from the University of California, Los Angeles. For her dissertation she examined the negotiation of local conflict related to housing, education, public services and other resources under state socialism. She was awarded several grants and fellowships for this work and has published articles in peer-reviewed academic journals and edited collections. Dr. Hackeling served as Principle Investigator and Project Director for W.I.N.G.S. ("Water Improvement by the Next Generation of Scientists"), an environmental science education and outreach grant for Hispanic-Serving Institutions, funded by the U.S. Department of Agriculture, 2005-2008. In 2009 she created a GIS Technology Outreach Consortium between Valley College and California State University, Northridge and organized a series of GIS training workshops for LAVC faculty, staff and students, funded by the LAVC Office of Professional Development.

Dr. Hackeling brings experience from private industry as well. She has worked as staff writer, editor, researcher and freelance journalist for consumer and trade publishing firms in Los Angeles and New York.

FTE Allocation and FT/PT Ratio

The department's Fall FTE allocation is 12.0. We have six full-time faculty members, who among them have 1.8 in reassigned time. This puts our full-time/part-time ration at 42/58. (Note: this includes the geography faculty member.)

Two disciplines are in need of additional faculty: anthropology and geography. These two disciplines have the largest FTE allocations in the department. Anthropology's usual Fall FTE allotment is 4.0. When growth classes have been available, we have often exceeded that amount and our average class size is consistently high. While an additional position was requested in our last program review (and annually to IPC), we experienced the retirement of a faculty member since that time making the need even greater. There are currently two full-time faculty members, one of whom has 0.8 reassigned time. This puts anthropology's full-time/part-time ratio at 30/70.

With the retirement of Sue Engler, the department is in great need of a biological anthropologist. Our biological anthropology course is one of our most popular and neither of our current full-time faculty members is a specialist in this field or teaches the associated lab course. We are forced to rely on adjunct faculty to organize and maintain our lab equipment and to assess our future lab needs.

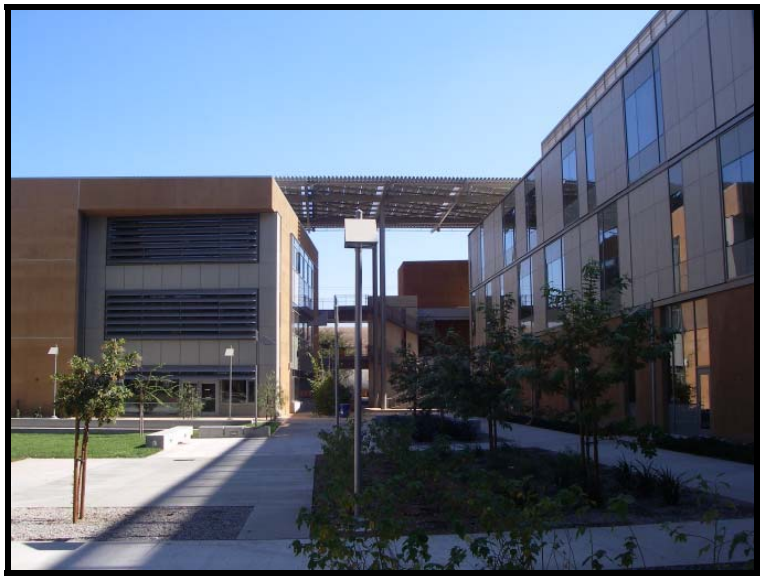
E. Facilities, Equipment, and Technology

Dedicated Facilities and Equipment

Allied Health and Sciences

With our recent move to the new Allied Health and Sciences building, some of our facilities and equipment needs have been met. There is one dedicated laboratory space each for Earth Science and Anthropology classes with an attached lab prep room. Two additional laboratory spaces with attached prep rooms are shared with the Biology Department. Much new material has been acquired, however, more is needed. The ESA Department is also in need of additional classroom space as our department is not always able to use the new facilities due to conflicts in scheduling with the Biology Department. In addition, Anthropology always schedules two classes at the same time in the morning slots. Since there is only one new dedicated classroom space in the AH&S building, our second class remains in the dilapidated bungalows.

All ESA full-time faculty have private offices in the new building, and adjunct faculty share office space.



The new Allied Health Sciences Building houses the Earth Science and Anthropology Department.

In addition, the ESA Department has shared space in the "backyard" where a planned archaeological "dig" will be located, as well as soil sample bins, recycling bins, composting bins, and a shared demonstration "living machine" to complement our environmental science offerings.

The department was able to purchase new equipment and build “smart” classrooms when the new AHS building was constructed. The “smart” classrooms are not reliable and the technology often does not work. This needs to be addressed with the contractor or vendor. Fifty laptop computers are stored in two "COWs" (Computers on Wheels) for student use.

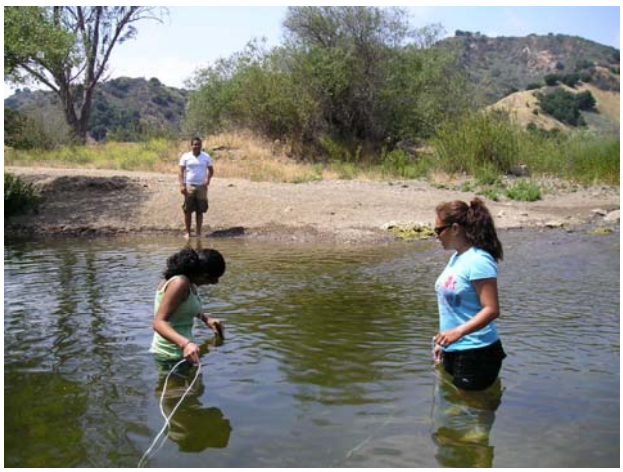
The department uses various software programs such as PowerPoint for lectures, Adobe Acrobat Connect Pro for videoconferencing, and Arc GIS. The department lacks some basic software such as Adobe Acrobat Professional and Adobe Photoshop Professional.

The laboratories do not have sufficient wall space to hang maps. The map collection held by the department was substantial, but outdated. New maps and atlases need to be ordered.

Earth Science and Environmental Science Equipment

There are microscopes for Oceanography, handheld GPS units, plotter, compasses, and cameras with video capability. The rock, mineral, and fossil collection is substantial, and exceeds the needs of the department. There is water- and air-quality monitoring equipment purchased through the WINGS grant along with support equipment which will need to be re-supplied (pH buffer solutions, for example).

Although the department has a state of the art computer lab and GIS software, the faculty need at least one part-time GIS computer technician to maintain and update the GIS software and associated data. The department in general is in need of student assistants to assist faculty in the computer labs and in setting up science laboratories in general.



Environmental Science students conducting field work with WINGS-funded equipment (Malibu Creek State Park, Santa Monica Mountains Recreation Area).

Anthropology Equipment

With the move to the new building, we were able to augment our existing lab equipment and collection to better serve our students. An issue that was mentioned in our last program review was the lack of a real lab space and sufficient equipment - something that was noted by students in the survey as well. We now have a dedicated lab space with proper tables, sinks, drying racks and adequate storage space. We have increased our collection of hominin skeletal material and acquired several comparative pieces as well. We acquired a few pieces that can be

used for the forensics portion of the lab course and hope to expand that collection to support a separate course in forensic anthropology.

The glass cases in the actual lab room allow us to display some of the material, including five complete skeletons of different species, in a way that students can browse on their own and use as a study tool. Additional material is housed in the storeroom. In addition to the skeletal materials, we have a small collection of stone tools. In order to analyze the materials, we have microscopes, calipers, tape measures and osteoboards. We also have several genetics kits and slide sets.

Skeletons in the Anthropology Lab.

Although we were able to recently acquire new materials, we still have a few gaps in our materials, especially additional mammalian and reptilian skeletons for comparative anatomy. In addition, we hope to grow our forensics collection to support a lab course in forensic anthropology.

Astronomy Facilities and Equipment

The Planetarium houses one 46-seat capacity classroom, one faculty office, and an Observatory on the roof. (The Observatory is too small to conduct classes; it is used to house the computer-guided Celestron 16-inch diameter telescope.)

The Planetarium classroom has a 24-foot diameter projection dome and a SciDome Digital Planetarium projection system, 5.1 surround sound system, VCR, CD/DVD player, laserdisk player, wireless microphone, and two dedicated video projectors for lecture use. 50 Apple laptop computers are stored in two "Computers on Wheels" cabinets.

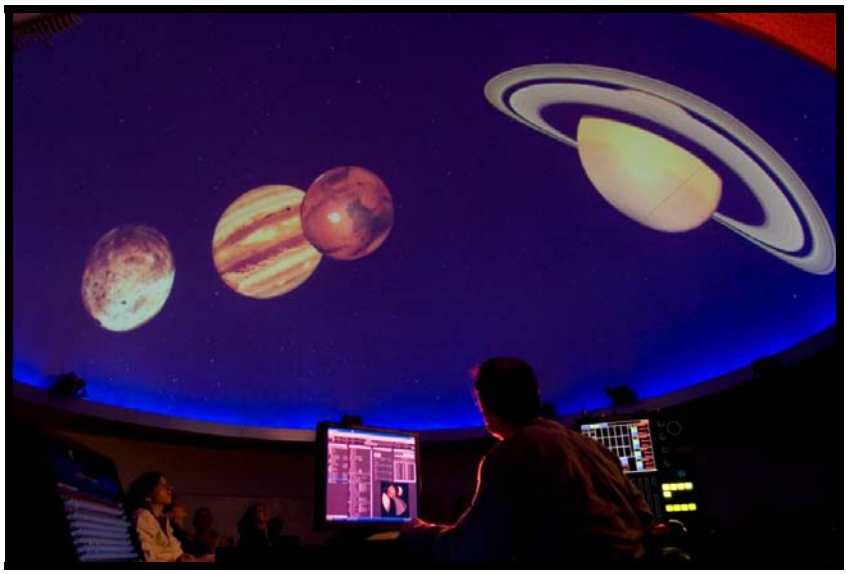
All of the Astronomy classes are conducted in the Planetarium, which has just one classroom. The Planetarium was opened in 1966, and the rooftop Observatory was added in 1971. No

Astronomy classes or programs are held in the Allied Health and Science building, or anywhere else on campus, due to the lack of classroom space and specialized equipment.

Students in the remodeled Planetarium.

The Planetarium has benefited from a 2003 NASA CIPA grant, which enabled the purchase of a computer graphic projection system, the “SciDome” from E & S Spitz, Inc. This replaced a forty-year old mechanical projector. This new projection system allows much greater versatility in the type of images that may be shown, from flights though the solar system to full-dome movies. Students have shown much more interest in astronomy as a result of this new system.

Funding for equipment from Propositions A and AA have enabled the replacement of eight portable telescopes used in the laboratory classes, refurbishment and computer control of the Observatory’s 16-inch Celestron telescope, as well as procurement of various accessories. In addition, 50 Apple laptop computers have been procured to allow students to perform computer-based laboratory exercises, a first for the Astronomy program. No classroom space was added to the building from either Propositions A or AA.



David Falk uses the Sci-Dome to demonstrate the solar system to students.

However, the observational laboratory classes continue to suffer from trees blocking the view of the sky, as well as limited Observing Deck space on the roof of the Planetarium building. More significantly, the program has now reached physical limits. The building cannot accommodate more classes due to the lack of room. In fact, the seating capacity has dropped from 50 to 46 per class as a result of recent remodeling.

Adding a 40-foot diameter, 100-seat planetarium chamber to the building would allow more students in each lecture section, as well as offering a large lecture space to replace similar rooms demolished in the Chemistry and Physics buildings. This additional space would allow two simultaneous classes to meet, or a mix of credit classes and outreach/recruitment programs for local K-12 schools. Despite being listed as a high-priority instructional facility on both bond Propositions A and AA, the Planetarium expansion was twice put onto a “not funded” list. Unless the 100-seat chamber is added to the building, the program will not be able to expand, or meet current enrollment demands.

The highest priority need for the Astronomy program is to expand the instructional space of the Planetarium. The program has reached a physical limit: additional students cannot be accommodated within existing sections, nor can more classes be added to the schedule. The addition of a 40-foot planetarium chamber, with appropriate projection and audio equipment, is clearly needed. Additional rooftop observing space is also needed for the observational laboratory courses.

In addition, trimming or removal of several large, overgrown trees blocking the view of the sky from the Observing deck (roof) is required in order to allow full functioning of the laboratory sections' telescopes.

F. Campus Resource Utilization

On-Campus Resources

Library

Our campus is served by a college library that is stocked with approximately 200,000 books and more than 360 periodicals. Access is provided as well through electronic resources such as internet, magazine and newspaper indexes and full text magazines and journal databases. The ESA Department purchased DVDs and videos for departmental use with the funding provided for modernization of the campus. The DVDs and videos are kept in the Resources Library in the new Allied Health Sciences Building.

Astronomy

The library holds approximately 800 Astronomy titles, which include paperbound and electronic texts. In addition, the library holds subscriptions to periodicals such as *Astronomy*, *Sky and Telescope*, and *Apeiron* magazines for current information. This collection covers a wide range of subjects within the Astronomy discipline, from planets to cosmology, and new texts are added as funding permits. The collection is reviewed periodically and obsolete materials are removed. This collection is judged as meeting our needs for reference materials.

Anthropology

The library currently offers 369 titles related to various areas of Anthropology. The library also includes nine anthropology dictionaries and 17 books on the history of the discipline. This collection of nearly 400 text resources provides a solid base on which students can expand and enrich their knowledge on the subject. Several new titles were requested during the curriculum update process. Audio-visual support is dated and minimal, with the exception of recent CD-ROM acquisitions. Additional support in the form of periodicals, journals, essays, etc. is also minimal.

The instructor reserve service is often used by instructors who leave copies of the textbook, handouts and additional articles for student use.

The department also has a modest library stocked by donations from the personal collections of faculty members. This includes a video library as well.

Environmental Science

The campus library holdings reflect the interdisciplinary nature of Environmental Science. They are broad-based and extensive. The Gale Database alone lists 10,000 electronically available articles accessible to our students. Books, journals, and periodicals cover the gamut from environmental policy and economics to air pollution and climate change, from water resources and pollution to agriculture, from solid and hazardous waste to energy sources, renewable and

non-renewable. A list of newer books on the topic of sustainability and related topics was recently given to the library to update collection.

Geology

The library holds approximately 854 titles that include holdings in Environmental Geology. The library has a substantial collection that covers mineralogy, petrology, structure and tectonics, geomorphology, earth history, and paleontology. A list of periodicals and magazines was recently given to the library to update the collection.

Oceanography

The library holds approximately 154 Oceanography titles. This does not include cross-disciplinary holdings under Marine Science and/or Marine Geology. A list of periodicals and magazines was recently given to the library to update the collection. The library has an adequate collection of recent textbooks that is updated as funding permits.

Computer Labs

The Department shares two computer labs. The first is a dedicated 40-station GIS/Spatial Analysis laboratory (AHS 236) for shared use with ESA as well as other disciplines across campus. As GIS gains wider acceptance, especially in Geography, Archaeology, Emergency Services, Sociology, and Environmental Science/Environmental Studies, we anticipate increased demand for lab use. The adjacent 24-station Bio-Informatics Laboratory can be used for smaller sections of Biology and ESA classes, seminars and directed/independent studies sections. The labs share a set of three large format HP plotters (one in need of repair), a color multifunction machine and a B&W laser printer for output. Two additional B&W laser printers (one for each lab) are currently on back-order under our building FF&E.

There are 2 COWs (computers on wheels), one with 20 laptops and one with 40 laptops, both with wireless connections, for use on the first floor where the ESA lab classrooms are located. The planetarium has 2 COWs with 25 laptops each currently awaiting programming.

The Department needs a dedicated IT person familiar with the GIS software and hardware and data management, as well as a student worker for maintenance and support work on nearly 120 laptops and workstations in the ESA department. In addition, the teaching of classes in GIS would be enhanced if there were a lab/teaching assistant with the requisite skills to address general problems with equipment, operator errors, and the like. Some of these tasks can be shared and other departments in the building are pushing for this additional position.

Other Labs

The planetarium observation deck features eight portable telescopes plus a 16-inch diameter, computer-guided telescope permanently mounted in the observatory. The planetarium also features computer graphics projection system (SciDome) and demonstration equipment. The

Observing deck is not large enough, however to comfortably accommodate large laboratory sections, and is surrounded by large trees hampering the view of the sky. The Planetarium now has two Computers On Wheels housing 50 Apple laptop computers for student use.

All of the Planetarium and Observatory's telescopes and computers are managed solely by the instructor for a given class. Student safety and instruction would be enhanced if a paid assistant were available, especially during laboratory sections. Such a person could be shared by the rest of the department.

Anthropology, Geology, Oceanography, and Environmental Science Labs are “smart laboratories” and contain a computer, DVD-VHS player, ceiling-mounted Epson projector, speakers, audio-assist and other technologies for disabled students and two smart whiteboards. In addition they are equipped with laboratory tables, demonstration tables, adequate storage and preparation space, and running water. In addition, the ESA Department has shared space in the "backyard" where a planned archaeological "dig" will be located, as well as soil sample bins, recycling bins, compost bins, and a shared demonstration "living machine" to complement our environmental science offerings.

Tutoring Services

The Department offers peer to peer tutoring in the all of the disciplines offered in the department. Students have access to resources left by the instructor including study guides, old exams, answer keys, equipment, and films. It is a much better facility than used in the past and includes private study rooms, DVD viewing stations, office space for tutors, and storage space. However, the room lacks computer stations for students and computer printing capability. The tutoring lab offers 20 hours per week of tutoring services, and would like to expand hours in the lab as well as moving into online tutoring. The space in the lab is shared with biology tutoring, which can be a challenge. For example, when biology students are working with anatomical models to learn and memorize body parts, they tend to be loud and take up a lot of space. As shown in the student survey, while students are very satisfied with the help they receive in tutoring, many do not utilize the services.

The Department consistently refers students to The Writing Center. In the past, the Department offered multiple sections of Supplemental Instruction (SI); unfortunately, this program has been discontinued for lack of funding. The Department would be very interested in re-incorporating that program into ours if that opportunity arises in the future.

ACE and VCAP

The Department works with the ACE and VCAP Program Directors to identify course and select qualified instructors to teach a variety of courses from the seven disciplines within the ESA Department. Courses offered in the past include Religion, Magic and Witchcraft, Human Biological Evolution, Environmental Science and Lab, and Astronomy, among others.

Student Services

Faculty in the department work closely with the DSPS office to meet student needs. For example, Professor Hams videotaped class lectures and a field trip for a disabled student who was physically unable to attend. The Department participated in the DSPS grant providing them funds to close-caption videos and DVDs shown in our classes. Through course syllabi and announcements in class qualified students are referred to student support services on campus including Financial Aid, Cooperative Education, and the Service Learning Program.

STARS

Students and faculty in the department regularly participate in STARS activities. Professor Rebecca Stein has facilitated various STARS and Professional Development workshops on campus.

Student and Community Groups

The LAVC Astronomy Group offers year-round public shows, lectures and observation sessions in the Planetarium. Audiences are composed of LAVC students, the local community, elementary school groups and scouting troops. Given the lack of funding to bus K-12 students off campus, and the lack of time for LAVC students to attend off-campus events, the LAVC Astronomy Group provides a critical service in bringing these programs to the local community.

Having unique equipment such as a planetarium and observatory attracts and retains students while serving as a powerful recruitment tool for younger visitors. The public Astronomy program is a positive program that neighbors can point to as a sign of the academic status of the local community. Critical to the success of this Group are its members; some are former LAVC students, but many are from the community. All of them volunteer their time to share their excitement for Astronomy with others.

Department faculty have served as advisors to various student groups on campus.

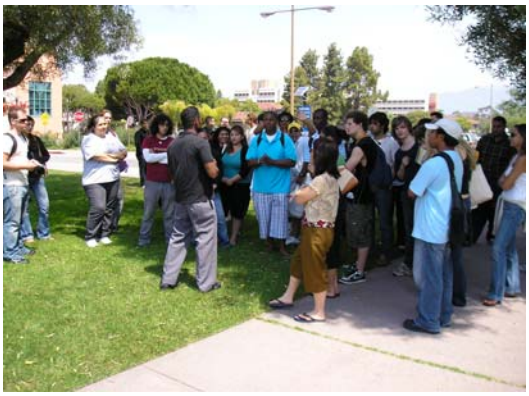
Relationships with Other Departments

The ESA Department interacts with a number of other groups and entities on campus including Media Arts. The ESA Department partnered with Media Arts to develop the Scientific Visualization Skills Certificate program. Critical to this program is the use of the Planetarium, with its SciDome projector, as a content creation and presentation venue.

The Department has partnerships and shares resources (materials, rooms, etc.) with other departments in the Allied Health & Sciences building largely as a result of the need to cooperate and optimize the use as we planned the new building. For example, in addition to shared classrooms and seminar rooms on the first floor of the lab wing, we share outdoor classroom space in the front quad, and backyard space, including lab and storage space in the Annex. Here, we share field-trip storage and equipment, as well as space and equipment in the Dendrochronology/Rock Lab.

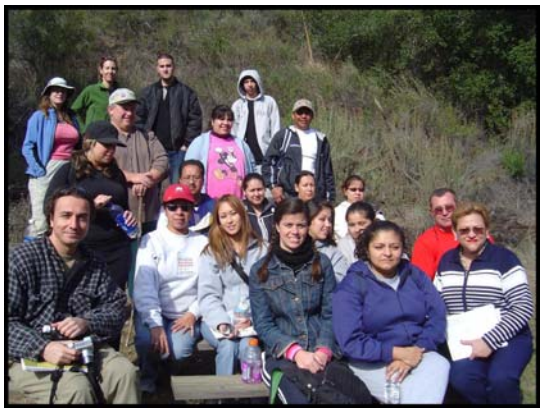
Off-Campus Resources

Because of the nature of the disciplines offered in our Department we offer fieldtrips to various locations off-campus. For example, Anthropology students visit the Gibbon Conservation Center near Santa Clarita, and the Los Angeles Zoo, as well as various local sites of cultural interest. Oceanography and Geology students visit the islands that compose the Channel Islands National Park and sections of the San Andreas Fault. Environmental Science students take field trips to natural sites ranging from the Eastern Sierra and White Mountains to local sites including the San Gabriel and Santa Monica Mountains, Will Rogers State Beach, and Sepulveda Basin, among others. In addition, students attend lectures at local universities (UCLA and Cal Tech among them), conferences (various sustainability conferences) and discipline-specific professional meetings and societies.



Students attend UCSB Sustainability Conference with Professor Leonard, where they enjoy a tour of the campus, including the geography and environmental departments.

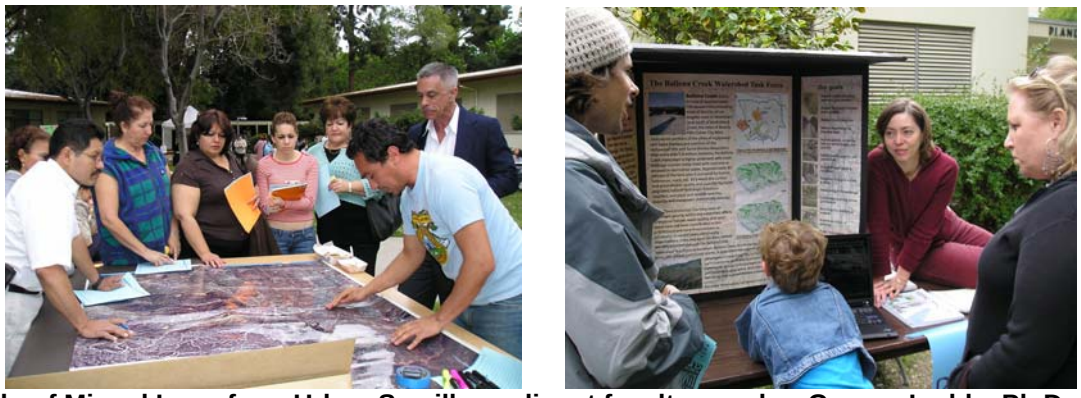
The Department takes students to the LACCD Gold Creek facility in Little Tujunga Canyon and has developed site-specific field exercises focused on water quality monitoring and field observation in Geography. The facility has ample equipment and access to flora, fauna and geologic features from a seasonal stream to an alluvial fan and a geologic fault, an indigenous site for anthropological investigations and a variety of native plants and animals.



Students spend the day at Gold Creek Reserve with Professors Hackeling and Leonard.

The Department also takes advantage of various resources available in the local area by inviting expert guest speakers and workshop facilitators (for both students and faculty professional

development). Community-based environmental groups have been represented at two “hands-on” environmental science fairs and an Agua University experience for local high school students was provided on campus through Urban Semillas in conjunction with the WINGS Project.



With the help of Miguel Luna from Urban Semillas, adjunct faculty member George Leddy, Ph.D. and Jessica Hall, students learn about watersheds at the first WINGS “HOME” (Hands-on-my-Environment) picnic.

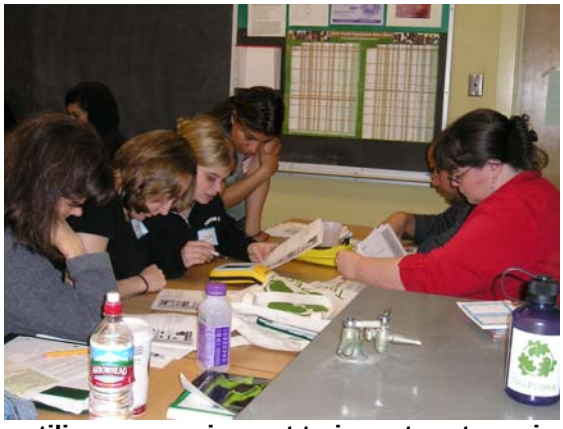
Astronomy students are provided the opportunity to view the sky through the college's telescopes at various "dark-sky" parks outside of the city during LAVC Astronomy Group "star parties". Volunteers from this Group share their expertise guiding students on various observations. For most urban students, these experiences are the first time they have had the opportunity to see the Milky Way and other "deep sky" objects in the real sky, aided by college and Astronomy Group-owned telescopes.

Grants

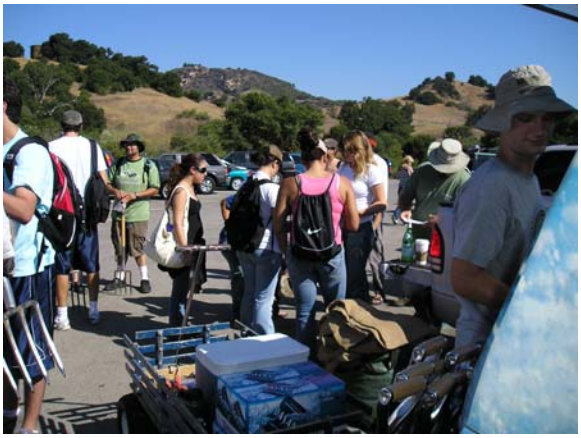
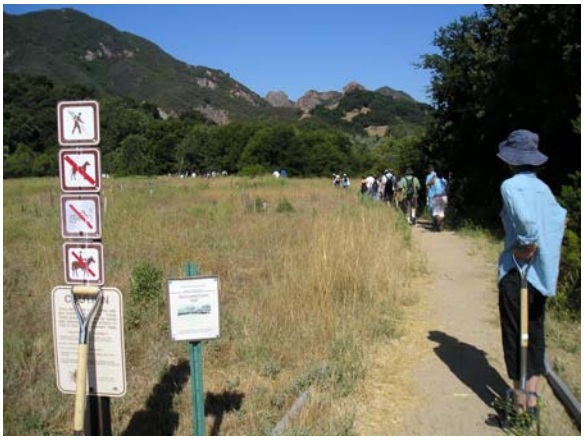
WINGS

In addition to the curriculum development activities described above, WINGS funding allowed Meredith L. Leonard, Environmental Science faculty, and Dr. Joan Hackeling, WINGS grant director and geography adjunct, to escort two Valley College students, mentored through the WINGS grant, to the annual MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) training and job fair in St. Louis, Missouri. The grant funded the popular WINGS monthly “Night at the Movies” environmental film series, and the attendance by Ms. Leonard of a one-week Geographic Information Systems workshop at the ESRI facility in Redlands.

The relationships fostered under the grant (through advisory panel interaction and grant activities), facilitated faculty networking with local community-based environmental groups (such as Miguel Luna’s “Urban Semillas”) and agencies (such as the USDA Forest Service). These relationships resulted in several campus activities, such as Watershed and Agua Universities (meant to educate local adults and adolescents about the significant water-related issues in their community), and the placement of several WINGS-mentored students in successful summer internships with the National Forest Service. Although the grant came to a close in fall 2008, the benefits of these relationships continue.




Students utilize gps equipment to inventory trees in Sun Valley with local environmental group, TreePeople.

Students participate in habitat restoration event with Heal the Bay (Malibu Creek State Park, Santa Monica Mountains).

Additionally, WINGS funded $50,000.00 in scholarships divided among two students. These students are now thriving at UCLA, graduating this spring, and planning to enroll in graduate programs in the fall. They continue to mentor subsequent students in our discipline, among other things announcing local environmental events and opportunities for student involvement.

NASA-CIPA

Jacquelyn Hams and David Falk were Co-Principal Investigators for a NASA Curriculum Improvement Partnership Award Grant titled “Curricula Upgrade and Science Facilities Improvement Project” from 2003-2006. The Sci-Dome Digital Projection equipment for the Planetarium was purchased with funding from the grant. In addition to purchasing updated equipment, the curriculum was updated to include the following course offerings: interdisciplinary Planetary Science course taught by Jacquelyn Hams and David Falk, and courses leading to a Science Visualization Certificate.

As part of the grant outreach efforts, Los Angeles Valley College offered two workshops on Teaching Astronomy to local K-16 teachers. The workshops were led by the CAPERS Astronomy Team from the University of Arizona.

On left - Dr. Timothy Slater conducts an astronomy education workshop with K-16 educators at LAVC.
On right - From left to right: Ed Prather, David Falk, Jacquelyn Hams, and Timothy Slater at a CAPERS Teaching Astronomy workshop at LAVC.

Several Los Angeles Valley College students have been "CURE" interns at the Jet Propulsion Laboratory in Pasadena, CA. The Curriculum for Undergraduate Research and Education program, co-sponsored by California State University, Los Angeles and Jet Propulsion Laboratory, offer minority students from selected community colleges an opportunity to conduct astronomical research with professional astronomers at a NASA site. These programs are usually run during the summer, although some students have continued into the Fall and Spring semesters.

One such participant from Valley College, Claudia Fernandez, is completing her degree in Astrophysics at California State University, Los Angeles.

Photograph of CURE intern Claudia Fernandez and Dr. Stephen Gillam of JPL.

Transfer Institutions and Advisory Boards

Faculty at California State University, Los Angeles have commented on the value of having telescopes available for students to conduct “hands-on” observations of the sky. In so doing, they learn how to work with mechanical and optical devices while learning about Astronomy. Researchers at Jet Propulsion Laboratory have welcomed Astronomy students into their internship programs. The researchers obtain assistance in researching and conducting experiments, and the students get valuable experience working in a research setting.

In spring 2009, Eugene Scott from Anthropology met with the chair of the Anthropology Department at CSUN, our major transfer institution, and discussed issues of articulation and our new major. Students receiving the new AA degree in Anthropology will be able to transfer to CSUN (and other institutions) having already satisfied their lower division major requirements.

As discussed above, when asked which skills and abilities they are most looking for in entry-level hires, WINGS grant advisory board members provided clear feedback. They seek employees with an academic background in the natural/physical sciences; with hands-on experience in environmental monitoring, familiarity with environmental policy; sustainable development, urban planning, and Geographic Information Systems (GIS).

IV. Needs Analysis and Recommendations

Curriculum

Our curriculum has grown in the last decade and generally is sufficient. The following curriculum development should be explored:

- Augmentation of the current planetary science course with current computer data and imagery
- Development of new biological anthropology courses in forensic anthropology or focusing on the primate order
- Development of new environmental science courses in environmental policy and planning
- Formation of partnerships with local agencies and universities to get students hands-on field experience
- Development of GIS modules for use in environmental science courses.

Awareness of department programs is low and should be addressed. The department should meet with the counseling staff and develop materials for students explaining each program.

SLOs have been established for all courses and programs and assessment has begun. The department needs to fully implement the student learning outcomes assessment cycle.

Faculty and Staff

While there are enough full-time faculty in most disciplines, a new full-time instructor in Anthropology is needed.

The possibility of student workers to help in lab courses and in the planetarium should be pursued as should additional student tutors.

With the move into our new building, all faculty need training in how best to utilize the new technology (both technically and pedagogically).

Facilities and Equipment

An additional Planetarium chamber (addition) to the existing building is needed to support the current enrollment and to allow the lecture and observational labs to expand.

While the move to the new building solved many issues, it created several more. Classroom space is insufficient to meet all department needs. Problems with the new equipment needs to be resolved. Additional lab materials for anthropology and maps for all disciplines are needed.

To maintain the labs, the department needs to secure funding for ongoing upkeep and replacement of existing equipment

Campus Resources

The new GIS computer lab is in great need of technical computer support.

The department needs to research the reasons why the tutoring center is underutilized and address the results. Possibilities include expanded hours, the addition of online tutoring and/or additional advertising to students.

V. Action Timeline

Goal	Action Required	Implementation
The ESA Department needs to work with the counselors and develop materials to build awareness of departmental programs.	Determine liaison and invite to Department meeting. Work with new ID to develop web based materials and develop department web page. Establish/grow student clubs to promote awareness.	Fall 09
The Department is also in need of computer support in our labs.	Discuss with Yefrem Kozin.	Su09
Students Assistants are needed for the Planetarium and the laboratory classes.	Make ASU request annually.	Ongoing
Training for faculty to incorporate new technology into their classes.	Work with Professional development director and ID designer to work with ESA at department meetings.	Su09 – F09
The SLO cycle needs to be established department-wide.	Begin assessments Plan disciplines meetings to discuss results.	Spring 09 Fall 09
Establish a departmental budget for ongoing replacement of existing equipment.	Make a presentation for campus budget committee.	Fall 10
Establish department lecture series/forums.	Beginning planning.	F10
Improve and expand tutoring services, including addition of online tutoring.	Survey students about use (or non-use) of tutoring. Work with Title V grant and work with ID.	F 09 F09 – Spring 10

Goal	Action Required	Implementation
	Try to increase tutoring budget.	F10
Ensure computer and printer access for students in the tutoring lab.	Chair will investigate whether equipment will be available though FF&E.	Su 09
Classroom technology should be functional.	Chair will meet with vendors and IT personnel to discuss functionality in smart classrooms.	Fall 09 and ongoing
Faculty – hire additional Anthropology and Geography faculty member.	Submit request to IPC.	Ongoing
Faculty should be trained on classroom technology.	Faculty will work with professional development and Virtual Valley.	Ongoing
Use of second smart classroom space for Anthropology and Geography.	Work with Life Science BUG.	Summer 09-F09
Start building for future forensics course.	Write course outline/SLOs Acquire additional lab materials. Explore grant opportunities.	F10
An additional Planetarium chamber (addition) to the existing building is needed to support the current enrollment and to allow the program to expand.	Participate in Prop J activities and planning.	Ongoing
The Astronomy faculty needs to obtain training on new equipment installed in the Planetarium and Observatory.	Working with Planetarium Director to schedule training	Ongoing

Goal	Action Required	Implementation
Develop an environmental policy and planning course to address the growing areas of Sustainable Design and LEED.	Research existing District course offerings and prepare course outlines, with SLOs.	Fall 2012
Provide students hands-on experience in environmental fields.	Explore opportunities to partner with local agencies and universities.	Ongoing
Develop GIS learning modules for use in environmental science courses and related disciplines in order to grow student interest in GIS.	Research existing modules developed by software providers/vendors and local universities and create some of our own.	Ongoing
Develop Planetary Science learning modules and activities.	Work with materials supplied by science education research teams and attend NSF and other scientific annual meeting workshops.	Ongoing
Develop curriculum for new courses in biological anthropology (forensics and primates)	Prepare course outlines and SLOs; acquire additional forensics materials	Fall 2012

Los Angeles Valley College
5800 Fulton Ave., Valley Glen, CA, 91401 (818) 947-2600

Program Review Appendices

Anthropology, Astronomy, Environmental Science, Geology, and Oceanography Programs

Earth Science and Anthropology Department

Spring 2009

A. Student Survey Example
B. Student Data Profile
C. Five Year Grid of Course Offerings
D. Curriculum Committee Sign-off on Course Outline Reviews
E. Student Learning Outcomes
F. Previous Program Reviews

A.

Student Survey Examples

B.

Student Data Profile

C.

Five Year Grid of Course Offerings

D.

Curriculum Committee Sign-off on Course Outline Reviews

LOS ANGELES VALLEY COLLEGE
CURRICULUM SIGN–OFF SHEET
FOR PROGRAM REVIEW

Disciplines: Astronomy, Anthropology, Astronomy, Geology, Environmental Science, Oceanography .

Item	Date Completed
All active course outlines have been updated	_____
All prerequisite, corequisite, and advisories have been validated	_____
All inactive courses have been archived	_____
All Distance Education addenda have be updated (if applicable)	_____
All TAP addenda have be updated (if applicable)	_____
All degree and/or certificate requirements have been updated (if necessary)	_____
All core courses for degrees and/or certificates have been offered at least once every 4 semesters (per Academic Senate motion of 10/21/1999)	_____

_____ _____
Curriculum Committee Chair Date

_____ _____
Curriculum Dean Date

_____ _____
Articulation Officer Date

_____ _____
Academic Senate President Date

_____ _____
Vice President, Academic Affairs Date

E.

Student Learning Outcomes

Program SLOs

Geology SLOs

Oceanography SLOs

Anthropology SLOs

Astronomy SLOs

Environmental Science SLOs

F.

Previous Program Reviews

Faculty members pose for a photo following acceptance of the Program Review document. Pictured on the bottom row from left to right are Joan Hackeling, David Falk, and Jackie Hams. Pictured on the top row from left to right are Meredith Leonard, Rebecca Stein, and Eugene Scott.