**Science**

SCI 2500. Prior Learning: Science. 1-5 Unit.

SCI 3050A. Environmental Chemistry and Human Health. 3-4 Unit.

This course is designed to develop students' conceptual, systemic understanding of the significance and role of chemistry and chemicals in life processes and the environment. The major topics explored include basic atomic theory, chemical bonding and types of chemical reactions, the elements involved in life processes, organic chemistry and biochemistry, environmental pollution and the biological effects of toxic chemicals on human health. Current events such as petroleum use, ethanol, and nuclear chemistry are also discussed. Utilizing an investigative approach to analyze everyday examples of chemistry, the course evokes and develops the personal experience of students in the class as participant-observers in an environmental system. This basic of understanding allows students to analyze critically issues that confront the environment on a daily basis and to become advocates for productive and sustainable solutions to those ideas.

SCI 3070. Leimert Park Living Lab: Native Plant Assessment & Restoration. 3-4 Unit.

This course in the science of plant biology and native plant restoration offers students an experiential, hands-on learning opportunity on-site at Leimert Park's new People Street Plaza. Leimert Park is widely regarded as the vital heart and soul of African American music, arts, and culture in Los Angeles, sometimes dubbed as the black Greenwich Village. (It is located just 4 miles from the AULA campus.) The new plaza created by closing off vehicular traffic is being designed by local artists to include large planters that define the perimeter of the plaza where the plants native to the area will be restored. Students will identify and document these native plants through photography and plant sampling. They will learn basic scientific observation, research and documentation techniques, as well as urban ecological processes and problem solving. This project will raise awareness of the role of plants in peoples daily lives by illustrating some of the most common and interesting traditional use of these native plants in the Leimert park area. Through this learning process, students will also have the opportunity to make a concrete contribution to the cultural development of this vibrant location by working with local community members. This course uses a Living Lab teaching model. Living labs are real-life innovative spaces where students, faculty, and community members can address a current problem in order to develop as well as test possible sustainable solutions. Living labs also provide many opportunities to teach, co-create, design, and implement solutions that involve many disciplines and they often have open-ended applications. This course will also provide an opportunity for artist and scientist to collaborate and encourage student driven scientific and ecological inquiry in public spaces. The students will be asked to observe the natural phenomena in a living system as well as reflect on this experience.

SCI 3100. Human Anatomy and Physiology. 3-4 Unit.

This course explores constituent elements and the principles of general organization and functioning of the human body. By exercising analysis of the living body's functions and the role they play in everyday human life, the course involves students into a systemic vision of biological and physical reasons behind the structural and operational unity of the body. The major topics include the structures and functions of cells, tissues, and organs as the body's interrelated systems and fundamental aspects of their participation in life processes such as responsiveness, movement, reproduction, growth, respiration, digestion, and excretion. This course is built as a means of evoking and developing students' personal experiences with the normal and abnormal performance of the human body. On this ground, students will develop basic knowledge essential to effectively maintain the body's well-being and communicate about health related issues.

SCI 3220. Physics of Urban Systems. 3-4 Unit.

This course develops students' conceptual understanding of the principles of physical laws that regulate and influence the functioning of urban systems. The major topics explored include energy transformation and flow, work and energy, how motion is measured and changed, heat, and systems. Utilizing an investigative approach, the course evokes and develops the personal experience of students in the class as participant-observers in an urban system. This basis of understanding allows students to critically analyze issues that confront urban systems on a daily basis, and to become advocates for productive solutions to those issues.

SCI 3360. Environmental & Social History of Los Angeles. 3-4 Unit.

The place we now call Los Angeles emerged 17,000,000 years ago from the Pacific Ocean. In the intervening years, mountains forced their way up from the land forming the boundaries of a large basin. Vast quantities of water coursed down the north and south sides of mountains and hills we now call Santa Monica, Simi, Santa Susanna, San Gabriel, and Verdugo. For all but 8,000 of those years, this place and those mountains needed no name. They just were. Then came the Tongva, the Chumash, and others - the first humans to settle here. Their names for this place were various: Kaweenga, Pasheekwnga, Komiivet, to name a few. After what seems to have been 8,000 relatively peaceful years, representatives of the Spanish King arrived in an area somewhere near the confluence of the Los Angeles River and the Arroyo Seco, declared this place to be El Pueblo de Nuestra Senora la Reina de los Angeles de Porciuncula. This course examines the changes in the land going forward from that time.

SCI 3380. Feminist Interventions Into Science & Technology. 2 Units.

SCI 3410. Science of Nutrition and Health. 3-4 Unit.

The science of nutrition is a study of the processes by which an individual takes in and utilizes food. Today's American culture espouses many conflicting views on the ways nutrition affects your health and quality of life. This course introduces the science of nutrition; the basics of the relationship between diet, health, and society and its applications to daily life. It includes up-to-date coverage of the newest research and emerging issues in nutrition.

SCI 3470A. Marine Biology and Ecology. 3-4 Unit.

This course examines the ecology of the marine environment, including current issues in marine biology. It includes a study of the world's oceans with emphasis on marine organisms and ecosystems. Marine biology and ecology is the primary emphasis, with some discussion and study of relevant social and economic issues of the seas.
SCI 3480. Ecology and the Environment. 3-4 Unit.
All species of living things alter the environments in which they live. Environmental issues in today's world prove human beings are no exception. This course examines the principles of environmental science and ecology, applying them to environmental issues, in particular those relevant to Southern California and Los Angeles County. Students study ecological principles and explore environmental issues from a multidisciplinary approach - primarily environmental science, biology and ecology. Other disciplines include physical science, earth science, and history of environmental issues.

SCI 3500.LA. Prior Learning: Science. 1-5 Unit.

SCI 3510. Independent Study. 1-5 Unit.

SCI 3530. Internship. 1-5 Unit.

SCI 3560. The Science of Psychopharmacology. 3-4 Unit.
This course assists students in developing an understanding of the science behind clinical drug therapies. Students explore the mechanism of action of drugs that affect the central nervous system and learn about their entry into the brain, their molecular targets and their global effects on the brain and behavior. Basic scientific models of disease, learning and addiction are used as discussion points to discover how drug therapies are developed using the scientific method.

SCI 3860. Systems & Systems Thinking. 3-4 Unit.
This course presents principles of general systems theory and key aspects of their application in psychology, organizational units, urban development, education, and health care by analyzing the systemic nature of the human body, business, educational settings, family, and the modern city. The course develops systemic dispositions in students' personal and professional experiences by providing basic knowledge and skills essential for students to identify their lives and work environments as systems and to generate solutions for changing those environments effectively.

SCI 4340A. Contemporary Neuro-Psychology. 3-4 Unit.
This course proposes models for relating brain dysfunction and/or damage to observable empirically describable psychological behavior. Basic concepts covered are: the relationship between brain and behavior, lateralization of brain function, emotions, and the neuro-psychology of development and aging. The course also considers a number of neuro-pathologies: neuro-linguistic problems, apraxias, memory problems, and the neuro-psychology of drug abuse.

SCI 4510. Science (Independent Study). 1-5 Unit.

General Education Transfer Credit Equivalency: Do not make any sections from this course.

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SCI X4000. Science / Science Domain. 1-9 Unit.
General Education Transfer Credit Equivalency: Do not make any sections from this course.

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