I. REQUEST FOR SABBATICAL LEAVE

I am applying for a one-semester sabbatical leave to begin fall 2007 at 70% compensation. I have been employed full time at Cerritos College since fall 1989 and took a sabbatical leave during the 1999-2000 school year.

II. PURPOSE OF LEAVE

The general purpose of my leave is to become a more knowledgeable, experienced, efficient, and creative teacher. I plan to accomplish this goal by taking time for travel research/study. A trip to France will allow me to study the history and foundation of modern biology. Another trip to the rain forest biome will provide me with experience and information for a better understanding of the intricacies of a complex, yet fragile ecosystem.

III. SPECIFIC OBJECTIVES

A. Travel for Biological Research and Study in France

"We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness on sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size". This common metaphor attributed to the twelfth-century French philosopher, Bernard of Chartres, has been used by 20th century biologists who attribute their success to the founding fathers of Biology. Who were these “giants”? How did they influence the development of science and modern civilization? These are great academic questions to cover in class.

I have studied and visited homes of several of these “giants”: in England, Robert Hooke, who first discovered cells; in Sweden, Carolus Linnaeus, who devised the system of modern classification; and in Holland, Anton von Leeuwenhoek, who discovered microbes. Use of
photos and personal stories of my visits have always been a successful way to introduce biological topics and generate greater interest, discussion, and student questions in class. This often makes it easier for students to grasp more complex, modern biological concepts.

Traveling to Paris, France will provide me with an opportunity to continue my study of the “fathers of biology” and learn about one of the most famous of all biologists, Louis Pasteur. Known as the father of microbiology, Pasteur developed the “germ theory” that led to modern medical techniques to fight infectious diseases. He discovered the treatment for rabies and developed the process of pasteurization to prevent the spoilage of milk and wine. The story of his life is told in the Pasteur Institute Museum that exhibits his original lab and apparatus, describes his famous experiments, and even contains his entombed body.

Other sites in Paris of historic interest and valuable to teaching biology will also be visited. Information and photographs for class will be obtained from the world famous Museum d'Histoire Naturelle (Natural History Museum) and the Le Jardin des Plantes (Botanical Gardens). The Natural History Museum contains three large galleries: The Grande Galerie de l’Évolution is a four story taxonomy wing displaying diversity and evolution of life on Earth, The Paleontology Museum houses impressive exhibits of skeleton and fossils, and the Entomology Museum shows thousands of strange and beautiful forms of insects. The Botanical Gardens was created in 1626 and has developed from the Royal Medicinal Plant Garden into a collection of over 8,000 species of plants from around the world.

After visiting Paris, I plan to travel to Provence to tour the “maquis” countryside and photograph native plant communities to compare with the native plants of California’s chaparral community. Both of these plant communities have evolved in a Mediterranean climate and are an excellent example of convergent evolution. The study of world biomes and plant communities is an important topic that is covered in lecture, laboratory, and field trips of my major’s Biology (Bio 200) and to some extent in the non-major’s Bio 120. The comparison of plants from France and California will be an important way to link the biological principles of taxonomy, evolution, adaptation, and ecology.

**B. Travel to Pacific Northwest to Research and Study Temperate Rain Forest Ecology**

Drenched in 12-14 feet of rain per year, the Temperate Rain Forest is a primeval plant community dominated by giant conifers cloaked in moss. The soggy forest floor is carpeted by a lush growth of ferns, tangled berry vines, and mushrooms. The forest provides a home for Mountain “Beaver”, Banana Slug, Tailed Frog, and other rare and ancient fauna. This community actually produces a greater biomass (amount of living matter) than the tropical rain forest. The Rain Forest of the Pacific
Northwest is a unique and complex web of ecological activity found nowhere else in the world.

The Temperate Rain Forest is one of the world’s most interesting biomes (complex ecosystems of distinct plant and animal communities adapted to a particular geographical area). Tropical rain forest, grassland, chaparral, estuary, and tide pool are other examples of biomes that are discussed in biology. Study and comparison of world biomes is a major principle included in many biology classes. It relates to many other biological subjects such as adaptation, food chains, predator/prey, symbiosis, and conservation.

This coastal ecosystem is of special interest because it demonstrates the importance and interdependence between the terrestrial forest community and the ocean community. The abundant forest vegetation is washed out to sea where it provides nutrition for the marine food chain. In turn, the ocean salmon migrate many miles inland to richly nourish the forest community food chain.

Washington’s Olympic Peninsula contains the best remaining example of the rain forest that once flourished along the coast from Oregon to southern Alaska. To study and photograph this unique ecosystem I intend to visit Olympic National Park, Puget Sound, San Juan Islands, and Vancouver Island. The experience, knowledge, photographs, and specimens I return with will be valuable for the ecology units taught in lecture and lab classes of Biology 200, Zoology 120, and Biology 120. During this visit I also hope to gain knowledge of Pacific Northwest Native American uses of plants to add to my ethnobotany unit in Bio 200.

IV. PREPARATION. To prepare for my proposed activities I have...

A. Attended digital camera/computer workshop in spring 2006.
B. Took a scouting trip to Olympic Peninsula in August 2006.
C. Researched and contacted travel agents.
D. Discussed and planned travel itinerary.
E. Conducted internet research on Louis Pasteur Institute, Paris’ Natural History Museums, and Botanical gardens.
F. Conducted internet research on Olympic National Park.
G. Identified and purchased books that relate to my proposed sabbatical leave activities.

V. PLANNED ITINERARY

A. Summer 2007 – travel to France (2-3 weeks) to visit:
   1. Louis Pasteur Institute and Museum
   2. Museum d’Histoire Naturelle (Natural History Museums)
      a. Grande Galerie de l’Evolution
      b. Paleontology Museum
      c. Entomology Museum
3. Le Jardin des Plantes
   a. Botanical Gardens
   b. Menagerie
      i. Zoo
      ii. Aquarium
4. Mediterranean countryside

B. September 2007 – travel to the Pacific northwest (3-4 weeks) to study temperate rain forest ecology and visit the following:
   1. Olympic National Park
   2. Puget Sound
   3. San Juan Islands
   4. Vancouver Island, British Columbia

C. October 2007 – Research/read/study materials supporting my trips and put together a journal from travel notes. Develop and organize photos.

D. November 2007 – Continue reading and study of biological applications to both trips.

E. December 2007 – Rewrite lectures in Bio 120, Bio 200, and Zool 120 to include notes and photos of history of Biology. Develop lessons in both lab and lecture sessions of Bio 120 and Bio 200 to better illustrate contrasting biomes and the understanding of ecological principles.

VI. SERVICE AND PRACTICAL APPLICATION

A. Service to Cerritos College will include:
   1. Collecting photos and specimens from travel for faculty use.

B. Classroom implementation/Service to the student will include:
   1. Producing more effective, meaningful, and interesting lectures and lab activities.
   2. Providing a source of specimens and photos to enhance student understanding of ecological principles.

C. Professional/Personal development will include:
   1. Becoming a more informed, experienced, and effective teacher.
   2. Providing an invigorating change of pace and excitement of learning that will increase my enthusiasm for teaching.
D. Service to community will include:
   1. Providing students with a more meaningful and effective learning experience to prepare them for participation in society as informed citizens.
   2. Increased awareness of Cerritos College as a leader in innovative technology.

VII. REPORT ON SABBATICAL LEAVE

A written sabbatical report will be submitted to the Vice President of Academic Affairs before the conclusion of the fall semester 2008 to verify that the objectives of my sabbatical leave have been met.