

## **CHANGES TO THE ACADEMIC MASTER PLAN**

Name change to B.A. in History, 2003

Delete the B.A. in Languages and Cultures, 2002

Delete the B.A. in Natural Sciences, 2004

Delete the B.S. in Organizational Management, 2005

Delete the B.S. in Informational Sciences, 2005

Add B.A. in Anthropology, 2004

Add M.S. in Bioinformatics, 2004

Add B.S. in Chemistry with Options in Chemistry, Pharmaceutical Chemistry, and  
Science Education, 2004.

Add B.A. in Psychology, 2003

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

**Proposed Name of Degree:** Bachelor of Arts in Languages and Cultures (History)

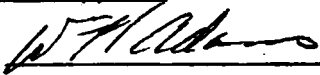
**Options/ Emphases in the Degree:** \_\_\_\_\_

**Faculty Proposing New Program:** Curriculum Committee

**Proposed Year of Implementation:** Fall 2003

**Review and Approval:**

**1. Curriculum Committee Approval:**

**Curriculum Chair:**  **Date:** 12/14/01

**2. Academic Senate Approval:**

**Chair, Academic Senate:**  **Date:** 12/14/01

**3. Administration Approval:**

**President or designee:**  **Date:** 12/19/01

**NAME OF PROGRAM AND DEGREE**

Name changed to Bachelor of Arts in History

**BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS)**

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

**Proposed Name of Degree:** Bachelor of Arts in Languages and Culture


**Options/ Emphases in the Degree:** \_\_\_\_\_

**Faculty Proposing New Program:** Curriculum Committee

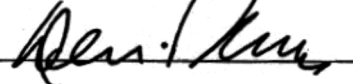
**Proposed Year of Implementation:** Fall 2004

**Review and Approval**

Curriculum Committee Approval:

Curriculum Chair:  Date 12/14/01

2. Academic Senate Approval:

Chair, Academic Senate:  Date: 12/14/01

3. Administration Approval:

President or designee:  Date 12/19/01

**NAME OF PROGRAM AND DEGREE**

- Bachelor of Arts in Languages and Culture (Sociology)
- Bachelor of Arts in Languages and Culture (Political Science)
- Bachelor of Arts in Languages and Culture (Psychology)
- Bachelor of Arts in Languages and Culture (Fine Arts)
- Bachelor of Arts in Languages and Culture (English)

**BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS)**

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

The Bachelor of Arts in Languages and Cultures was proposed in the original Master Plan, but after considerable debate the faculty was unable to determine a satisfactory way of implementing it. The decision was reached to delete this major and replace it with its various contributing disciplines as separate majors.

PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)

Proposed Name of Degree: Bachelor of Arts in Anthropology

Options/ Emphases in the Degree: \_\_\_\_\_

Faculty Proposing New Program: William H. Adams

Proposed Year of Implementation: Fall 2004

Review and Approval:

1. Curriculum Committee Approval:

Curriculum Chair: W. H. Adams Date: 12/14/01

2. Academic Senate Approval:

Chair, Academic Senate: Deirdre Date: 12/14/01

3. Administration Approval:

President or designee: Richard R. Rusk Date: 12/19/01

**NAME OF PROGRAM AND DEGREE**

Bachelor of Arts in Anthropology

**BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS)**

Anthropologists stress holistic relationships between humans and their environment using culture as the organizing theme. Because of the ecological, holistic, approaches anthropology provides a solid basis to understand the difficult choices facing modern humans, like overpopulation, dwindling resources, environmental degradation and pollution.

The anthropology program at CSUCI focuses upon applied anthropology. Using the four-field approach (cultural, physical, linguistics, and archaeology) within an applied context means that students will learn anthropological theory and method in ways that have practical meaning in their world. Applied anthropology is an ideal setting to advance the university's commitment to service learning because students will be examining real world problems and seek solutions for these in the local community.

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

Anthropology is the most interdisciplinary field of study. Anthropological research incorporates related knowledge from the sciences, humanities, and social sciences. As such, it provides an important nexus for students wishing a broad liberal arts education, while its curriculum provides essential threads connecting other disciplines interested in humankind.

CSUCI presently offers no degrees in the social sciences. Because of its interdisciplinary nature anthropology would be an ideal new major for the social sciences, for it would contribute greatly to the Liberal Studies BA and to General Education. A substantial number of the anthropology courses needed for a major are already planned to be taught in support of Liberal Studies, Environmental Science and Resource Management, and General Education.

Recognizing the importance of anthropology in the curriculum, the first course of any kind taught at CSUCI (summer 2001) was General Anthropology. The summer 2002 offerings will be Introduction to Cultural Anthropology and a course cross-listed with chemistry, Who Done It? An Introduction to Forensics.

Anthropology is taught at each of the community colleges in CSUCI's service region. According to the data provided by the Ventura Community College district, there are currently 14 Anthropology majors at their three colleges (Ventura, Oxnard & Moorpark) who have completed 45 or more units with a 2.0 or better GPA. Santa Barbara City has 5 Anthropology majors who have completed 45 or more units with a 2.0 or better GPA. Thus, there are 19 potential transfer students in anthropology. If a BA were offered locally, it would encourage more of the community college students to major in anthropology.

An anthropology major is not offered at CSUN@CI. As a result, students interested in anthropology end up majoring in sociology there. If we offer a major, it would undoubtedly attract many of these students.

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

**Proposed Name of Degree:** Bachelor of Arts in Natural Sciences

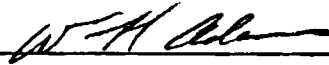
**Options/ Emphases in the Degree:** \_\_\_\_\_

**Faculty Proposing New Program:** Curriculum Committee

**Proposed Year of Implementation:** Fall 2004

**Review and Approval:**

**1. Curriculum Committee Approval:**

**Curriculum Chair:**  **Date:** 12/14/01

**2. Academic Senate Approval:**

**Chair, Academic Senate:**  **Date:** 12/14/01

**3. Administration Approval:**

**President or designee:**  **Date:** 12/19/01

**NAME OF PROGRAM AND DEGREE**

Bachelor of Arts in Natural Sciences

**BRIEF DESCRIPTION OF PROGRAM (75 - 100 WORDS)**

**JUSTIFICATION FOR PROPOSAL (75 - 100 WORDS)**

The Bachelor of Arts in Natural Sciences was proposed in the original Master Plan. The faculty decided to delete this major.

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

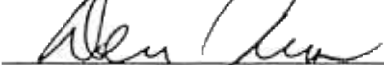
Proposed Name of Degree Master of Science Degree in Bioinformatics  
Proposed Year of Implementation Fall, 2004  
Options/ Emphases in the Degree: \_\_\_\_\_  
Faculty Proposing New Program Ching-Hua Wang, Ivona Grzegorzcyk

**Review and Approval:**

1. Curriculum Committee Approval:

Curriculum Chair:  Date 12/10/01

2. Academic Senate Approval

Chair, Academic Senate:  Date: 12/14/01

3. Administration Approval:

President (or designee)  Date 12/19/01

## NAME OF PROGRAM AND DEGREE

Master of Science Degree in Bioinformatics

## BRIEF DESCRIPTION OF PROGRAM (75 - 100 WORDS)

Bioinformatics is recognized as the first new technological field in the 21<sup>st</sup> century and has attracted a great deal of attention since the recent completion of the Human Genome Project. It is interdisciplinary in nature, encompassing biology, biochemistry, mathematics and computer science. It transcends genomics, transcriptomics and proteomics that are by themselves new emerging fields, derived from cellular and molecular biology. Bioinformatics requires scientists to use sophisticated computational methods to analyze complex genomic and proteomic databases and apply the findings to solve practical genetic, biochemical, biological and medical problems. This is a program designed for students who have acquired a B. S. degree in Biology, Biochemistry, Mathematics, or Computer Science and are interested in learning the knowledge and skills needed for the rapidly growing field of Bioinformatics.

The program requires students to take a set of common core science courses at various levels to obtain a general background required for the field of bioinformatics. They would then complete a sophisticated and cutting-edge, computer-intensive bioinformatics program. It would be a team-learning and task-oriented experience. All students would be required to carry out an internship project with biotech communities by incorporating the knowledge and skills they learned from classrooms and laboratories to tackle a current problem in biotechnological or biomedical field.

## JUSTIFICATION FOR PROPOSAL (75 - 100 WORDS)

1. Nationally and internationally, there is a tremendous need for people with bioinformatical skills. It is estimated that just within the US, 20,000 positions will need to be filled within the next 5 years, with far more anticipated needs for the coming decade. Locally, CSUCI is located in the center of the biotech corridor in the Ventura County. Regionally, CSUCI is one of the CSU campuses within Southern California, which has the largest clusters of biotech companies, including the near-by biotech giant companies like Amgen and Baxter. All biotech companies are experiencing a severe shortage of people with bioinformatical skills, including this region.
3. None of CSU universities currently offers this program due largely to the extensive demarcation of traditional fields. Therefore, CSUCI should seize the golden opportunity and develop this much-needed program and develop a unique niche in this area.
4. The program would be supported by the existing majors programs in biology, mathematics and computer science as well as the environmental sciences and the anticipated chemistry programs (in terms of lab space and faculty expertise).
5. The graduate students in the program will serve as Teaching Assistants in all computer related lab activities in biology, chemistry, mathematics, business, education and all other relevant programs as well as cell and molecular biology labs. This is much less expensive than hiring full-time or part-time lecturers to run those labs. They will also serve in university-wide computer labs as Work-Study students in university-wide computer labs.
6. The program is interdisciplinary in nature and will strengthen and enhance offerings of all existing programs.
7. The program is expected to generate outside funding in the form of grants and contracts, hence bringing additional resources to the university.
8. The program is very timely and intellectually inspiring for faculty members interested in



**new research areas. The program will bring prestige and recognition to CSUCI locally and nationally.**



**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

**Proposed Name of Degree:** Bachelor of Science in Organizational Management


**Options/ Emphases in the Degree:** \_\_\_\_\_

**Faculty Proposing New Program:** Curriculum Committee

**Proposed Year of Implementation:** Fall 2005

**Review and Approval:**


**1. Curriculum Committee Approval:**

**Curriculum Chair:**  **Date:** 12/14/01

**2. Academic Senate Approval:**

**Chair, Academic Senate:**  **Date:** 12/14/01

**3. Administration Approval:**

**President or designee:**  **Date:** 12/19/01

**NAME OF PROGRAM AND DEGREE**

Bachelor of Science in Organizational Management

**BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS)**

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

The Bachelor of Science in Organizational Management was proposed in the original Master Plan. The faculty decided to delete this major.

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

**Proposed Name of Degree:** Bachelor of Science in Informational Sciences

**Options/ Emphases in the Degree:** \_\_\_\_\_

**Faculty Proposing New Program:** Curriculum Committee

**Proposed Year of Implementation:** Fall 2005

**Review and Approval:**

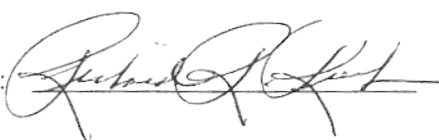
**1. Curriculum Committee Approval:**

**Curriculum Chair:**  **Date:** 12/14/01

**2. Academic Senate Approval:**

**Chair, Academic Senate:**  **Date:** 1-14/01

**3. Administration Approval:**

**President or designee:**  **Date:** 12/19/01

**NAME OF PROGRAM AND DEGREE**  
Bachelor of Science in Informational Sciences

**BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS)**

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

The Bachelor of Science in Informational Sciences was proposed in the original Master Plan.  
The faculty decided to delete this major.

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**


Proposed Name of Degree B.A. and B.S. degrees in Chemistry  
Proposed Year of Implementation: Fall 2004  
Options/ Emphases in the Degree B.S. degree: Option in Chemistry  
B.S. degree: Option in Pharmaceutical Chemistry  
B.S. degree: Option in Science Education  
Faculty Proposing New Program Philip D. Hampton

**Review and Approval:**


**1. Curriculum Committee Approval:**

Curriculum Chair:  Date: 12/14/01

**2. Academic Senate Approval:**

Chair, Academic Senate.  Date: 12/14/01

**3. Administration Approval:**

President (or designee):  Date: 12/19/01

### NAME OF PROGRAM AND DEGREE

B.A. in Chemistry

B.S. in Chemistry with Options in Chemistry, Pharmaceutical Chemistry and Science Education

### BRIEF DESCRIPTION OF PROGRAM

The B.A. and B.S. Degrees in Chemistry is designed to prepare students for jobs at chemical and biotechnology companies, for pre-professional programs (i.e., pre-medical), for postgraduate work in Chemistry, and for single-subject accreditation as a secondary science teacher. Interdisciplinary coursework and a capstone consisting of an internship/ independent research and a senior paper/ seminar presentation are part of both programs. Three options are provided in the B.S. degree: the Chemistry Option, the Pharmaceutical Chemistry Option, and the Science Education Option. The Chemistry Option will provide a more traditional Chemistry degree, which will later be certified by the American Chemical Society. The Pharmaceutical Chemistry option is designed to prepare students for research scientist or sales positions at pharmaceutical/ biotechnology companies and requires additional coursework in Biology and Economics/ Business. The Science Education option provides future teachers with the broad science background and single-subject accreditation required to teach science at the secondary school level; this option requires additional coursework in Computer Science and Geology.

### JUSTIFICATION FOR PROPOSAL

No degree in Chemistry is currently offered at CSUN-CI and there is no local university that offers a bachelors degree in Chemistry with the Pharmaceutical Chemistry/ Science Education options.

The growth of biotechnology companies has created a significant demand for chemists who can model protein structure and the interactions of proteins with synthetic molecules, and synthesize and test lead compounds as potential new pharmaceuticals. While most of the California-based biotechnology/ pharmaceutical companies are located in the Bay Area and near San Diego/ La Jolla, there is reason to believe that an incubator effect of Amgen in Thousand Oaks could result in Ventura County becoming a fertile location for the formation of new biotech companies. Amgen's website lists numerous positions at their T.O. facility for individuals with a bachelor's degree in Chemistry or Biochemistry. The small molecule research program at Amgen, which has as its focus the identification and synthesis of organic molecule inhibitors of enzymes, requires bachelor's level chemists that have training in advanced organic synthesis techniques, state-of-the art instrumentation, and molecular modeling, and knowledge of biochemistry and molecular and cellular biology. The Pharmaceutical Option will provide students with exactly this background. The required Economics/ Business courses in this option will provide our graduates with a unique business background that will make them highly qualified for positions at pharmaceutical companies. The Science Education option would help alleviate the current severe shortage of high school science teachers by providing graduates that have single-subject accreditation in Chemistry in addition to a broad training in the sciences. When a biochemist has been added to the Chemistry faculty, a petition will be submitted for the Chemistry Option to be certified by the American Chemical Society.

It is extremely important that a proposal to change the Academic Master Plan to add Chemistry as a major be submitted by January 1, 2002 to allow grant proposals to be written for the acquisition of a Nuclear Magnetic Resonance (NMR) Spectrometer. This instrumentation is badly needed for undergraduate courses and for the scholarly research of current and future CSUCI Chemistry faculty. Successful funding of a grant to acquire such instrumentation would demand evidence of a commitment by CSUCI to develop a Chemistry program in the very near future and a commitment to supporting the research activities of Chemistry faculty members. The cost of an NMR is approximately \$250 – 300K with the Group II equipment for the new science building being only \$1.4 million total. Obtaining funding for an NMR from the National Institutes of Health (submission deadline in March) or the National Science Foundation (submission deadline early July annually) would allow at least half of the cost of the NMR to be covered by the grant. With the Group II equipment funding becoming available from July 2002, it is imperative that grant applications be submitted at the beginning of 2002.

**PROPOSAL TO CHANGE THE MASTER PLAN  
(SHORT FORM)**

Proposed Name of Degree: B.A. in Economics

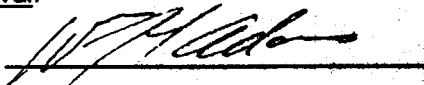
Proposed Year of Implementation: Fall 2004

Options/ Emphases in the Degree: \_\_\_\_\_

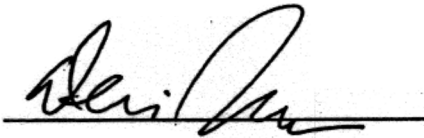
Faculty Proposing New Program: Dennis Muraoka

**Review and Approval:**

**1. Curriculum Committee Approval:**

Curriculum Chair:  Date: 12/14/01

**2. Academic Senate Approval:**

Chair, Academic Senate:  Date: 12/14/01

**3. Administration Approval:**

President (or designee):  Date: 12/19/01

**NAME OF PROGRAM AND DEGREE:****Bachelor of Arts in Economics****BRIEF DESCRIPTION OF PROGRAM (75 – 100 WORDS):**

When dealing with scarce resources, choices must be made as to how to divide these resources among competing, alternate uses. Economics is the social science that addresses the allocation of scarce resources. When applied to individuals, economics attempts to explain and predict the behavior of individuals as consumers, entrepreneurs, managers, employees, bureaucrats, government officials, voters, politicians and the like. This is the subject matter of microeconomics. When applied to society as a whole or to the world economy, economics attempts to explain and predict each economy's level of output, employment and prices, and the nature of interaction between economies. This is the subject matter of macroeconomics.

**JUSTIFICATION FOR PROPOSAL (75 – 100 WORDS)**

Economics is a member of the family of social and behavioral sciences. It is a core discipline offered at most colleges and universities. It is attractive to individuals interested in careers in the private and public sector management, education, and the law. The foundation courses for an economics major at CSUCI may be found in general education and other CSUCI majors (in particular, liberal studies, business, and environmental science and resource management).