California State University, San Marcos
- Authorization To Offer Non-Degree Extension Credit Course Through Extended Studies-

1. Desired Term: Summer 2006
2a. Course abbreviation and Number: EDUC E1031
2b. Abbreviated Title: (No more than 25 characters, including spaces)
   LSSI Biotech Boot Camp

Year of implementation: 2006

4. Number of Units: 3
5. Billing Units: 3

6. Allowed Student Levels: UG X GR X EE X (Default is to check all three levels)

7. Grading Method:
   N Normal (N) (Default is Letter Grade +/-, Students may request Credit/No Credit)
   Normal Plus Report-in-Progress (NP) (As for Normal, also allows Report-in-Progress)
   Credit/No Credit Only (C)
   Credit/No Credit or Report-in-Progress Only (CP)

8. Mode of Instruction:
   (See pages 17-23 at http://www.calstate.edu/cim/data-elem-
dle/APDB-Transaction-DEP-SectionV.pdf for definitions of the Course Classification Numbers)

<table>
<thead>
<tr>
<th>Type of Instruction</th>
<th>Number of Credit Units</th>
<th>Instructional Mode (Course Classification Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>1</td>
<td>C-02</td>
</tr>
<tr>
<td>Activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>2</td>
<td>C-16</td>
</tr>
</tbody>
</table>

9. Attributes: Course Requires Consent for Enrollment? Yes X No
   Faculty Credential Analyst Dean Program/Department - Director/Chair

   Prerequisites: ____________________________ Co-requisites: ____________________________

10. Does this course impact other discipline(s)? (If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.) Yes X No
    If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

    Disciplines: ____________________________ Support ____________________________ Oppose ____________________________

    Signature ____________________________ Date ____________________________

    Signature ____________________________ Date ____________________________

Important: Please Complete

1. Instructor: Martin Ikkaada
2. Please complete the Extension Course Proposal Form
   http://www.csusm.edu/academic_programs/Curriculum_Forms/index.html

SIGNATURES: (COLLEGE LEVEL)

1. Program Director/Chair ____________________________ Date 4/25/06
2. College Dean (or Designee) ____________________________ Date 4/25/06

(UNIVERSITY LEVEL)

3. Dean for Extended Studies (or Designee) ____________________________ Date

4. Vice President for Academic Affairs (or Designee) ____________________________ Date
OFFICE OF EXTENDED STUDIES
EXTENSION COURSE PROPOSAL FORM

In planning the components of our Extended Studies program at Cal State San Marcos, this office consults closely with the academic colleges and departments to determine the suitability of course content, teaching methods and instructor qualifications. To assist us in evaluating your proposed course for credit, please submit this completed form to our office as soon as possible. Questions before you submit? Call me at (760)750-8713.

- **Course Title:** Life Sciences Summer Institute – Biotechnology Boot Camp

- **Course Description:**
Intended to be an intense introduction to the fast growing biotech industry, this course is mainly geared towards the application of biology, chemistry and physics in high school classrooms. Through a series of hands-on biotechnological labs, high school teachers will learn some basic skills relevant to the industry. Topics include:
  - Drug and device development processes
  - Introduction to regulatory issues (GLP, GMP, FDA)
  - Basic laboratory skills and equipment knowledge
  - Identifying and addressing applicable teaching standards

The course also includes site visits and tours to some of San Diego County’s prominent biotech companies and institutes that focus on this technology.

- **Course Objectives:**
By engaging high school teachers in hands-on labs and exposing them to real world experiences in the Biotech industry, they will gain new skills, knowledge and resources that will encourage excellence in their classrooms. With this additional understanding, they can also help to identify and encourage their students, who are the future workforce for the booming biotech industry.

- **Evaluation:** The basis for grades will be based on labs completed in class, participation, and assignments.

- **Course Length:** 56 hours over 2 weeks to result in 3 units of contract credit

- **Proposed Date(s):** July 10 – July 21, 2006

- **Location:** Biogen Idec Community Lab

- **Support Needs:** None (Biogen Idec Community Lab & San Diego Workforce Partnership provides all necessary supplies)

- **Comments:** This is the second year of this teacher externship sponsored by San Diego Workforce Partnership, funded by a grant by US Dept. of Labor – Employment and Training Administration. The intent of this program is to motivate teachers to interest their students in the Life Sciences at earlier ages.

*When completed, please return this form to: Catherine Boyle, Office of Extended Studies, Cal State San Marcos, 333 S. Twin Oaks Valley Rd., San Marcos, CA 92096; FAX: (760)750-3138; E-mail: cboyle@csusm.edu*
Educational Background:
M.S. Oregon State University, 1970
B.A. California State University, Long Beach, 1968

Relevant Experience:
2005- present Consultant for educational outreach. Amgen, Inc
2005 Presenter Summer Teacher Institute, Biogen-Idec. Funding agencies:
   Department of Labor, San Diego Workforce Partnership and BIOCOM.
2005 Presenter Recombinant DNA and Protein Expression workshop funded by BABEC
2001 Author and developer of AMGEN-Bruce Wallace Biotechnology Program
2001 Participant Human Genome Project, University of Washington
1999-present Teaching faculty for UCLA’s Center for Academic and Research
   Excellence. Funding agencies: National Science Foundation, National Institutes of
   Health and the Howard Hughes Medical Institute. Program Director: Richard
   Weiss, Chemistry and Biochemistry Department, UCLA
1999 Presenter, Recombinant DNA workshop for the UCLA Bridges program. Funding
   agency the National Institutes of Health, UCLA Bridges Program and the Los
   Angeles/Orange County Biotechnology Center. Bridges Program Director:
   Richard Weiss, Chemistry and Biochemistry Department, UCLA
1998 First recipient, Teacher of the Year Award, presented by the Pierce College
   Professors Emeriti
1998-present Co-presenter, The Science and Ethics of Biotechnology for college and
   high school faculty. Sponsored by the Partnership for the Advancement of
   Chemical Technology, Miami University, Middletown
1997 Participant, Human Genome Analysis workshop, Foothill College. Sponsored by
   Cold Spring Harbor.
1997 Co-presenter, Recombinant DNA workshop for the UCLA Bridge Program.
   Funding agency NIH and the UCLA Bridges program.
   Experimental learning community course funded by the Department of Education.
1996 Co-presenter, Biotechnology at Pierce College. CSUPERB conference on
   Biotechnology, California Polytechnic College, Pomona.
1996 Principal investigator, NSF-ILI grant: Implementation of Biotechnology in
   Majors Biology. DUE 9551346
1994 Participant, Introduction to Recombinant DNA Technology and Genome
   Analysis. Sponsored by Cold Spring Harbor Laboratory.
1993 Participant, Vector Workshop Program in Advanced DNA Science. Sponsored
   by Cold Spring Harbor Laboratory.

Other:
1971-present Professor of Biology, Los Angeles Pierce College.
1997-present Advisory Board member, Central Coast Biotechnology Center.
1996-present Director of educational outreach Los Angeles/Orange County
   Biotechnology Center at Pasadena City College.
1988-1995 Chairman, Life Science Department, Los Angeles Pierce College.