**Authorization To Offer Non-Degree Extension Credit Course Through Extended Studies**

1. **Desired Term:** Summer 2006

2a. **Course abbreviation and Number:**
   EDUC E1030

2b. **Abbreviated Title:**
   (No more than 25 characters, including spaces)
   **LSSI Curriculum Connection**

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)
   - N Normal Plus Report-in-Progress (NP) (As for Normal: also allows Report-in-Progress)
   - C Credit/No Credit Only (C)
   - CF Credit/No Credit or Report-in-Progress Only (CF)

8. **Mode of Instruction:**
   (See pages 17-23 at http://www.csusm.edu/clnt/data-element/prop-transaction-DED-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>2</td>
<td>C-02</td>
</tr>
<tr>
<td>Activity</td>
<td></td>
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<tr>
<td>Lab</td>
<td>1</td>
<td>C16</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.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Signature</th>
<th>Date</th>
<th>Support</th>
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**Important: Please Complete**

1. **Instructor:** Martin Ikanda

2. Please complete the Extension Course Proposal Form
   [http://www.csusm.edu/academic_programs/Curriculum_Forms/index.html](http://www.csusm.edu/academic_programs/Curriculum_Forms/index.html)

**SIGNATURES: (COLLEGE LEVEL)**

1.系主任/教育主任/副校长/院长
   
   *(Signature)*
   
   4/25/06

2. 院系/教育学院/部门/学院院长/院长
   
   *(Signature)*
   
   4/25/06

**UNIVERSITY LEVEL**

3. 院系/教育学院/部门/副院长/院长
   
   *(Signature)*
   
   05/04/06

4. 院系/教育学院/部门/学院/校长/院长
   
   *(Signature)*
   
   4/25/06
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 Curriculum Connection

- **Course Description:**
This course is mainly geared towards biology, chemistry and physics high school teachers that are interested in updating their curriculum and knowledge of the fast growing biotech industry. Following a general overview of the region’s industry and California Standards discussion, participants will be hosted to site visits and tours of some of San Diego County’s prominent biotech companies and institutes that focus on this technology. Upon return to the classroom, colloquiums and curriculum simulations will result in updating or creating completely new lesson plans for their upcoming school year.

- **Course Objectives:**
By exposing teachers to real world experiences in the biotech industry, they will gain new skills, knowledge and resources that can refresh and update the curriculum and activities they use in their classrooms. With this additional understanding, they can also help to identify and encourage their students, who are the future workforce for our growing biotech industry that leads the nation.

- **Evaluation:** The basis for grades will be based on participation, finished lesson plans and assignments.

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

- **Proposed Date(s):** July 24 – August 4, 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 students in 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.
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM</td>
<td>Lab 1: Introduction to Microbiology</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Lab 2: REVIEW (SS)</td>
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<tr>
<td>11:00 AM</td>
<td>Lab 3: Life in Biodiversity</td>
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<td>12:00 PM</td>
<td>LUNCH</td>
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<td>1:00 PM</td>
<td>Lab 4: Comprehension of DNA</td>
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<td>2:00 PM</td>
<td>Lab 5: Transforming Epithelial Cells</td>
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<td>3:00 PM</td>
<td>Lab 6: Preparing and Overnight Culture of coli</td>
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<td>4:00 PM</td>
<td>Lab 7: Transforming Plasmid with a Recombinant Plasmid</td>
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<tr>
<td>5:00 PM</td>
<td>Lab 8: Transformation of Genomic DNA</td>
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<tr>
<td>6:00 PM</td>
<td>Wrap-up</td>
</tr>
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</table>

**Lunch**

**Time**

**Monday (7/10)**

**Tuesday (7/11)**

**Wednesday (7/12)**

**Thursday (7/13)**

**Friday (7/14)**

**Week 1 - Teacher "Boot Camp"**

**Instructor:** Sandy Silvecki/Mary Lynam

**Location:** Biogen Idec Community Lab

**Life Sciences Summer Institute**
<table>
<thead>
<tr>
<th>Time</th>
<th>Monday (7)</th>
<th>Tuesday (17)</th>
<th>Wednesday (25)</th>
<th>Thursday (26)</th>
<th>Friday (28)</th>
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**Location:** Local Life Sciences Industry

**Week:** 2 & 3 - Teacher Externships

**Life Sciences Summer Institute**
<table>
<thead>
<tr>
<th>Time</th>
<th>Monday (7/13)</th>
<th>Tuesday (8/1)</th>
<th>Wednesday (8/2)</th>
<th>Thursday (8/3)</th>
<th>Friday (8/4)</th>
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<tbody>
<tr>
<td>8:00 AM</td>
<td>&quot;Occupational&quot; Activity</td>
<td>&quot;Experience: What&quot;</td>
<td>&quot;Curriculum Simulation Lab&quot;</td>
<td>&quot;Guest Speaker&quot;</td>
<td>&quot;Teacher-Led: TBD&quot;</td>
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<tr>
<td>9:00 AM</td>
<td>&quot;Office of Education&quot; San Diego County</td>
<td>&quot;Guest Speaker&quot;</td>
<td>&quot;Coordination&quot;</td>
<td>&quot;Outlook Activity&quot;</td>
<td>&quot;Teacher-Led: TBD&quot;</td>
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<tr>
<td>10:00 AM</td>
<td>&quot;Vacation&quot;</td>
<td>&quot;Guest Speaker&quot;</td>
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<td>&quot;Outlook Activity&quot;</td>
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</tr>
</tbody>
</table>

**Notes:**
- Teacher-Led: TBD
- Location: Biogen deCODE Community lab
- **"Curriculum Connection"**
- **LIFE SCIENCES SUMMER INSTITUTE**