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

<table>
<thead>
<tr>
<th>1. Desired Term:</th>
<th>Summer</th>
<th>Year of Implementation:</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a. Course Abbreviation and Number:</td>
<td>EDUC 1107</td>
<td>2b. Abbreviated Title:</td>
<td>ADV HHMI Institutes</td>
</tr>
<tr>
<td>3. College:</td>
<td>CoEHHS, School of Education</td>
<td>4. Number of Units:</td>
<td>2</td>
</tr>
<tr>
<td>5. Billing Units:</td>
<td>$80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Allowed Student Levels:</td>
<td>UG GR EE</td>
<td>(Default is to check all three levels)</td>
<td></td>
</tr>
<tr>
<td>7. Grading Method:</td>
<td>X Normal (N) (Default is Letter Grade +/-, Students may request Credit/No Credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal Plus Report-in-Progress (NP) (As for Normal; also allows Report-in-Progress)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit/No Credit Only (C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit/No Credit or Report-in-Progress Only (CP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Mode of Instruction:</td>
<td>(See pages 17-23 at <a href="https://www.calstate.edu/cims/data-elem-dic/APDB-Transaction-DED-SectionV.pdf">https://www.calstate.edu/cims/data-elem-dic/APDB-Transaction-DED-SectionV.pdf</a> for definitions of the Course Classification Numbers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of Instruction</td>
<td>Number of Credit Units</td>
<td>Instructional Mode (Course Classification Number)</td>
</tr>
<tr>
<td></td>
<td>Lecture</td>
<td>2</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Attributes: Course Requires Consent for Enrollment? Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty</td>
<td>Credential Analyst</td>
<td>Dean</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-requisites:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Does this course impact other discipline(s)? (If there is any uncertainty as to whether a particular discipline is affected, check &quot;yes&quot; and obtain signature.)</td>
<td>X Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Important: Please Complete**

1. Instructor: Dr. Denise Garcia

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
   [Signature] 6-30-15

2. College Dean (or Designee)
   [Signature] 6-30-15

**SIGNATURES: (UNIVERSITY LEVEL)**

3. Dean of Extended Studies (or Designee)
   [Signature] 6-30-15

4. Vice President for Academic Affairs (or Designee)
   [Signature] 7/1/15
In planning the components of our Extended Learning 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—along with Form X: New Course Non-degree Credit—to our office as soon as possible. Questions before you submit? Call (760)750-4020.

- **Course Title:**
  *Advanced HHMI BioInteractive Resources that Cross-cut the Practices of Science*

- **Instructor:** Dr. Denise Garcia

- **Course Units:** 2

- **Course Description:** *(Please provide a short paragraph describing the purpose, topics and audience for your course. Be sure to include the benefits for students who take your course. An edited version of this description will be used for promotional copy.)*

This course is designed for instructors of biology who teach advanced high school courses such as Advanced Placement Biology or International Baccalaureate Biology, and biology instructors who teach undergraduate biology courses at 2-year or 4-year institutions. At the level of a traditional biology curriculum, the course will reinforce and enhance content knowledge of topics such as: biochemistry, molecular genetics, gene regulation, cell signaling, cancer genetics, evolution and statistics. The focus of the course will be the application of these topics through the lens of the Practices of Science primarily focusing on modeling, statistical analysis of data, and evidence-based reasoning. Through an active and collaborative completion of several high-quality, free, classroom-ready resources from HHMI BioInteractive, the participants will gain a greater insight into how the practices of science can be implemented and integrated with one another throughout a course.

- **Course Objectives:** *(Provide specific student learning outcomes and how they will be achieved.)*

  ✓ Students will gain a better understanding of the implementation and integration of the practices of science by actively applying, discussing, and examining the practices through several classroom activities linked to various curriculum topics.

  ✓ By delving into collaborative groups working to complete various classroom activities, students will enhance their content knowledge of various biology curriculum topics including biochemistry, molecular genetics, gene regulation, cell signaling, cancer genetics, evolution, and statistics.

  ✓ By completing several resources and exploring the website, students will develop a deeper understanding of several classroom-ready free resources from BioInteractive.org, which are produced by the Howard Hughes Medical Institute's Educational Resources Group, as well as become familiar with the vast array of other resources available to advanced biology courses, both at the high school level as well as the undergraduate level.

- **Evaluation:** *(What will be the basis for grades? How will you know that the students have achieved the course objectives?)*

Several formative assessments will be utilized through the course as well as the monitoring of active participation in the collaborative nature of the course. Final detailed evaluations will be completed that will allow participants to explain which activities they will utilize and how they plan to implement the course materials in their own classroom. Participants will be required to submit a meaningful reflection paper at the end of the workshop.
• **Course Length:** (How many actual contact hours in class? Note: Credit courses must contain a minimum of fifteen 50-minute contact hours for each semester unit of credit, and outside of class work by students is required.)

25 hours/16 hours face to face / 9 hours preparation/homework

• **Proposed Date(s):** June 22-24, 2015

• **Location:** (Indicate if you are proposing this course to be scheduled and offered in our facilities, or if this course is to be held at an off-campus location, such as a school, district or county office, company, etc.)

Quantum Learning Center, 1938 Avenida del Oro, Oceanside, CA 92056

• **Support Needs:** (Please indicate any special services you will need, such as audio-visual equipment, photocopying, room set-up, etc.)

N/A

• **Comments:** (Please add any other relevant information, such as whether or not the course has been taught elsewhere successfully, why the course is needed in our area, marketing suggestions, etc.)

N/A

*When completed, please return this form, along with an up-to-date resume (with teaching references) to: Nicole Orsini, Office of Extended Learning, Cal State San Marcos, 333 S. Twin Oaks Valley Rd., San Marcos, CA 92096; FAX: (760)750-3138; E-mail: norsini@csusm.edu*
EDUC 1107
Advanced HHMI Biointeractive Resources that Cross-Cut The Next Generation Science Standards

June 22-24, 2015
25 hours/16 hours face-to-face/9 hour preparation/homework
Offsite
Summer 2015

Conceptual Framework Theme: Engaging diverse communities through leading and learning for social justice.

Professor: Dr. Denise Garcia
Phone: 760-750-8524
E-Mail: dgarcia@csusm.edu
Office: Associate Dean, College of Education, Health & Human Services

School of Education Mission & Vision Statement
(Adopted by SOE Governance Community, January 2013)

Vision
To serve the educational needs of local, regional, and global communities, the School of Education advances innovative practice and leadership by generating, embracing, and promoting equitable and creative solutions.

Mission
The mission of the School of Education community is to collaboratively transform education. We:
- Create community through partnerships
- Promote and foster social justice and educational equity
- Advance innovative, student-centered practices
- Inspire reflective teaching and learning
- Conduct purposeful research
- Serve the School, College, University, and Community

Basic Tenets of our Conceptual Framework
- Student centered education
- Research and theory specific to the program field inform practice
- Connections and links between coursework and application
- Strong engagement between faculty and candidates
- Co-teaching clinical practice
- Culturally responsive pedagogy and socially just outcomes
COURSE DESCRIPTION:
This course is designed for instructors of biology who teach advanced high school courses such as Advanced Placement Biology or International Baccalaureate Biology, and biology instructors who teach undergraduate biology courses at 2-year or 4-year institutions. At the level of a traditional biology curriculum, the course will reinforce and enhance content knowledge of topics such as: biochemistry, molecular genetics, gene regulation, cell signaling, cancer genetics, evolution and statistics. The focus of the course will be the application of these topics through the lens of the Practices of Science primarily focusing on modeling, statistical analysis of data, and evidence-based reasoning. Through an active and collaborative completion of several high-quality, free, classroom-ready resources from HHMI BioInteractive, the participants will gain a greater insight into how the practices of science can be implemented and integrated with one another throughout a course.

ENROLLMENT: How do I sign up?
- Online: http://sdcoen120ms.org/1020-94441

COURSE OBJECTIVES:
✓ Students will gain a better understanding of the implementation and integration of the practices of science by actively applying, discussing, and examining the practices through several classroom activities linked to various curriculum topics.

✓ By delving into collaborative groups working to complete various classroom activities, students will enhance their content knowledge of various biology curriculum topics including biochemistry, molecular genetics, gene regulation, cell signaling, cancer genetics, evolution, and statistics.

✓ By completing several resources and exploring the website, students will develop a deeper understanding of several classroom-ready free resources from BioInteractive.org, which are produced by the Howard Hughes Medical Institute’s Educational Resources Group, as well as become familiar with the vast array of other resources available to advanced biology courses, both at the high school level as well as the undergraduate level.

COURSE REQUIREMENTS: N/A

ASSIGNMENT SUBMISSION – Several formative assessments will be utilized through the course as well as the monitoring of active participation in the collaborative nature of the course. Final detailed evaluations will be completed that will allow participants to explain which activities they will utilize and how they plan to implement the course materials in their own classroom.

A meaningful reflection paper will be due to Denise Garcia.

REQUEST FOR TRANSCRIPTS
Transcripts are NOT automatically sent. Request your official CSUSM transcript after September 1, 2015. Please follow the instructions at http://www.csusm.edu/enroll/Transcripts.html.

CONTACT
For course requirements, contact the instructor. For registration questions, contact Alexandra Fresh, Administrative Support Coordinator, at (760) 750-8617 or by email at afresh@csusm.edu.