Course Change Proposal
Form A

<table>
<thead>
<tr>
<th>Academic Group (College):</th>
<th>Education</th>
<th>Academic Organization (Department):</th>
<th>Teacher Education</th>
<th>Date:</th>
<th>2/8/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Course Proposal:</td>
<td>New <em>x</em> Change ___ Deletion ___</td>
<td>Department Chair:</td>
<td>Rita Johnson</td>
<td>Submitted by:</td>
<td>Hui-Ju Huang</td>
</tr>
<tr>
<td>Does this course fulfill a requirement for single-subject or multiple subject credential students?</td>
<td>Yes <em>x</em> No ___</td>
<td>For Catalog Copy:</td>
<td>Yes <em>x</em> No ___</td>
<td>Semester Effective:</td>
<td>Fall <em>x</em> Spring <strong>, 2012</strong></td>
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<td>CCE (Extension):</td>
<td>Yes ___ No ___</td>
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This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number):  
If changing an existing course, should new version be considered a repeat of the original version? If so, the same Course ID will be maintained. If not, a new Course ID will be assigned. Note: In PeopleSoft terminology, the Course ID is the unique system identifier, not the Catalog Nbr.  
Yes ___ No ___

<table>
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<tr>
<th>Change from:</th>
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<th>Change to:</th>
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<tbody>
<tr>
<td>Subject Area (prefix) &amp; Catalog Nbr (course no.):</td>
<td>Title:</td>
<td>Subject Area (prefix) &amp; Catalog Nbr (course no.):</td>
<td>Title: Methods in Science Education, A</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Units: 1.5</td>
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JUSTIFICATION:
The College of Education has recently reorganized structurally and programmatically. As a result, new courses are being created and existing courses are being altered. This new course draws content from the best practices of the programs that were merged during this reorganization and responds to new student outcomes and course design principles defined during this transformational process.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See http://www.csus.edu/umanual/acad.htm - Guidelines for Catalog Course Description)
First part of a 2-course sequence that provides introduction to organization of instructional materials, techniques of presentation, and methods of evaluation for secondary school science. Articulated with student teaching and should be taken the same semester. Activities include discussions, presentations and demonstrations. Graded. 1.5 units.

Note:
| Prerequisite: Admission to Single Subject Credential Program | Enforced at Registration: | Yes _x_ No ___ |
| Corequisite: EDTE474A | Enforced at Registration: | Yes X ___ No ___ |
| Graded: Letter _x_ Credit/No Credit ___ | Instructor Approval Required? | Yes ___ No X ___ |
| Course Classification (e.g., lecture, lab, seminar, discussion): Discussion | Title for CMS (not more than 30 characters): | MethodsinScienceEdA |
| Cross Listed? | Yes ___ No_x___ | If yes, do they meet together and fulfill the same requirement, and what is the other course. |
| How Many Times Can This Course be Taken for Credit? | _Once___ |
| Can the course be taken for Credit more than once during the same term? | Yes ___ No _x___ |
Description of the Expected Learning Outcomes: Describe outcomes using the following format: “Students will be able to: 1), 2), etc.”
See the example at http://www.csus.edu/acaf/example.htm

Teacher candidates will be able to:
- Relate state-adopted science academic content standards to major concepts, principles & investigations in the science discipline.
- Explain the nature of science, and rationales of teaching science in secondary classrooms.
- Organize effective laboratory and field activities, and establish and monitor procedures of the safety issues.
- Apply a variety of informal and formal, as well as formative and summative assessments to measure students’ learning progress.
- Familiarize the format of standardized tests and state-adopted student assessment program.
- Create a learning climate sensitive to students’ cultural and ethnic background and encourage all students to participate in science learning.
- Apply pedagogical principles to plan and implement comprehensive instructions for all students, including English learners, students with special need and student with diverse background.
- Apply a variety of instructional strategies to encourage student development of critical thinking, problem solving, and inquiry skills.
- Implement an effective classroom management plan and create a positive learning environment to support academic and personal success through caring and respect.
- Examine and reflect on their profession in relation to principles of classroom equity and the professional responsibilities of teachers.
- Evaluate their own teaching practices and science discipline knowledge by engaging in the cycle of planning, teaching, reflecting, discerning problems, and applying new strategies.

**Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.**

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre- and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

1. Written assessments; reading reflections and responses to the questions
2. Written lesson plans
3. Demonstration of teaching
4. Attendance and participation

For whom is this course being developed?
Majors in the Dept _____ Majors of other Depts _____ Minors in the Dept _____ General Education _____ Other _____
Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes _____ No _____
If yes, identify program(s): Single Subject Credential Program

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes _____ No _____
If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). ________________________________

The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Accessibility: Following course approval, and prior to the start of the semester in which the new or revised course will be taught for the first time, an accessibility checklist [available at http://www.csus.edu/accessibility/checklist.html] shall be completed and submitted to the appropriate Dean’s office. An accessible syllabus shall also be made available online, preferably prior to the start of that semester’s open registration period.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures: Date

Department Chair: ____________________________________________
College Dean or Associate Dean: ________________________________
CPSP (for school personnel courses ONLY)
Associate Vice President and Dean for Academic Programs

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean’s office to send original after approval to Academic Affairs, at mail zip 6016. An electronic copy must also be sent.

5/20/2010