

**NEW COURSE PROPOSAL**

**PROGRAM: SINGLE SUBJECT TEACHER CREDENTIAL PROGRAM**

**1. Catalog Description of the Course.** *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of \_\_\_ units); time distribution (Lecture \_\_\_ hours, laboratory \_\_\_ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

**EDSS 532. TEACHING SCIENCE IN MIDDLE SCHOOLS (3)**

Three hours lecture/discussion per week

Prerequisite: Admission to Single Subject Credential Program.

Corequisite: EDSS 570 (1-2 units): or EDSS 575

A study of content, methodology, materials and current research in middle school science teaching. Focuses on developing science process skills in middle school students. Emphasizes reflective practice based on California Standards for the Teaching Profession and the use and alignment of curricula to the Academic Content Standards for California Public Schools. Includes an emphasis on teaching in multicultural, multilingual and inclusive classrooms.

**2. Mode of Instruction.**

	Units	Hours per Unit	Benchmark Enrollment
Lecture	<u>3</u>	<u>1</u>	<u>20</u>
Seminar			
Laboratory			
Activity			

**3. Justification and Learning Objectives for the Course.** (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements)

Required Course for students seeking a Single Subject Credential in Science.

Students who successfully complete this course will be able to:

1. Formulate objectives based on observable student outcomes.
2. Write appropriate goals and measurable objectives for life, physical and geo- science lessons and units.
3. Describe the nature and needs of early adolescents and translate this understanding into special considerations for teaching this age group in school settings.
4. Design engaging lessons aligned to the California State Academic Content Standards and National Science Education Standards
5. Design activities which promote the development of science concepts, inquiry, process skills, and a positive attitude toward science by providing for a variety of individual differences.
6. Engage in productive questioning and lead discussions.
7. Select and use appropriate instructional strategies and equipment based upon safety standards.
8. Utilize and create variety of assessment strategies and techniques for evaluating learning.
9. Integrate all of the sciences, as well as other disciplines, to teach concepts.
10. Present science, technology and society issues.
11. describe the instructional accommodations to make content accessible for diverse learners (English Learners and special needs candidates included) in science.
12. infuse technology into their science teaching and plan.

4. Is this a General Education Course                      YES                      NO

If Yes, indicate GE category:

A (English Language, Communication, Critical Thinking)	
B (Mathematics & Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

5. **Course Content in Outline Form.** *[Be as brief as possible, but use as much space as necessary]*

Middle School – The School in the Middle  
Middle School Science Curriculum and The Middle School Student  
Science Experiences for all Students  
Science for students with exceptionalities  
Science for students from culturally diverse backgrounds  
Motivating the Early Adolescent in Learning Science  
Effective Questioning Strategies to Promote Inquiry  
Connecting Science with Other Subjects  
Mathematics  
Language Arts  
Social Studies  
Integrated Curriculum  
Authentic Assessment for Inquiry Science Curricula  
Performance Assessments  
Using Technology in the Modern Middle School Science Classroom  
Using technology  
Managing technology use  
Science Field Trips/Excursions for Middle School Students  
Safety in the Laboratory

6. **References.** *[Provide 3 - 5 references on which this course is based and/or support it.]*

Chiapetta, E.L. & Koballa, T.R. (2002). *Science instruction in the middle and secondary schools*. Upper River Saddle, NJ: Merrill.  
Koballa, T.R. & Tippins, D. J. (2000). *Cases in middle and secondary science education*. Upper River Saddle, NJ: Merrill.  
Layman, J. W. (1996). *Inquiry and learning: Realizing science standards in the classroom*. New York, NY: The College Board.  
National Research Council. (1996). *The National Science Education Standards*. Washington DC: National Academy Press.  
Trowbridge, L.W., Bybee, R.W., & Powell, J.C. (2000). *Teaching secondary school science*. Upper River Saddle, NJ: Merrill

7. **List Faculty Qualified to Teach This Course.**

Science Education Faculty

8. **Frequency.**

a. Projected semesters to be offered: Fall   X   Spring   X   Summer   X  

9. **New Resources Required.**

None

10. **Consultation.**

Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

N/A

Dr Jeanne Grier and Dr Robert Bleicher

9 January, 2003

Proposers of Course

Date: