New Course Request

Check Appropriate Boxes:  Undergraduate credit ☑  Graduate credit □  Professional credit □

1. School/Division: CLAS
2. Academic Subject Code: GEOL

3. Course Number: T106  (must be cleared with University Registrar)
4. Instructor: H. P. Scott

5. Course Title: Earth and Space Science for Elementary Teachers

Recommended Abbreviation (Optional) (limited to 32 Characters including spaces) ...

6. First time this course is to be offered (Semester/Year): Fall 2004

7. Credit Hours: Fixed at 4.0 or Variable from □ to □

8. Is this course to be graded S-F (only)? Yes □ No X

9. Is variable title approval being requested? Yes □ No X

10. Course description (not to exceed 50 words) for Bulletin publication: Principles of earth and space science, laboratory, demonstration, and exploration enrich the course material and develop the expertise needed for success in the elementary school classroom. Does not satisfy the general education requirement in the College of Liberal Arts and Sciences. Prereq: Math T101 and Phys T103 or Chem T105

11. Lecture Contact Hours: Fixed at □ 2.0 or Variable from □ to □
12. Non-Lecture Contact Hours: Fixed at □ 3.0 or Variable from □ to □
13. Estimated enrollment: □ 40 of which □ 0 percent are expected to be graduate students.
14. Frequency of scheduling: twice per year. Will this course be required for majors? □ No
15. Justification for new course: □ provide instruction in earth & space science, especially for elem. educ. majors
16. Are the necessary reading materials currently available in the appropriate library? Yes □
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.
18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.
19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: Date 11/10/03

Dean of Graduate School (when required)

Approved by: Date 1/13/04

Chancellor/Vice-President

University Registrar

After School/Division approval, forward the last copy (without attachments) to the University Registrar for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.
GEOL T106
Earth & Space Science for Elementary Teachers
Sample Syllabus


Course Description: In this course, which is specially addressed to pre- and in-service elementary school teachers, you will be introduced to a number of topics and methods of investigation in earth and space science. Through your experiences and those of your classmates, you will find a rich source of material for use in your classrooms.

The course will utilize a modified learning cycle. Each week will begin with an **Exploratorium** activity, during which you will engage in a self-paced, largely unguided, hands-on exploration of an important topic in physical science, using only materials that can be found in the typical elementary school classroom or everyday life. This will be followed by the lecture or **Concept Introduction** phase of the cycle. Here the topics are outlined, the theory discussed, and the content focused. Finally, the guided laboratory or **Concept Application** phase will give you the experience of applying your knowledge to a larger problem. You are required to complete each of the three phases in order every week and to hand in a laboratory report and TASK assignment (see below) at the beginning of the following week.

Homework: Homework will be assigned each week, consisting of questions from the text and other exercises. The homework will not be collected and graded. However, the importance of doing the homework cannot be overstated. Exams will be based largely on the assigned homework.

**TASK Assignments:** Each week you will be given a TASK (Thinking About Science and Kids) assignment. This assignment is designed to encourage you to think about how you will teach and evaluate each concept in your own classroom. You will also review the TASKs of other students.

Examinations: There will be two (2) mid-term examinations, each covering material from the five (5) weeks prior to the exam. The final will be comprehensive and cumulative, but weighted (50%) towards the final three weeks of material, with the first twelve weeks also accounting for 50%.

Grading: The course grade will be determined using the following weighting factors...

- Exploratoria: 10%
- TASK assignments: 10%
- TASK reviews: 10%
- Laboratory: 20%
- Mid-term exams: 30%
- Final exam: 20%
Class Schedule:

Week 1: The Earth, the Moon, and the Sun
Week 2: The Planets
Week 3: Stars and Galaxies
Week 4: Origin and Evolution of the Universe
Week 5: Earth’s Atmosphere
Week 6: Exam #1
Week 7: Minerals
Week 8: Rocks
Week 9: Plate Tectonics
Week 10: Earthquakes
Week 11: Volcanoes
Week 12: Exam #2
Week 13: The Oceans
Week 14: The Hydrologic Cycle
Week 15: Earth’s History
Week 16: Final Exam