Submit one printed copy of this form with signatures and one printed copy of the syllabus to the Provost/VPAA's Office (Austin Building, Room 309). Initial submissions are due no later than February 15, 2013.

1. College: **Science and Mathematics**
2. Department: **Geology**
3. Course status: **existing; does not require modification**
4. Course prefix and number: **GOL 132**
5. Course title: **The Earth Through Time**
6. Course catalog description: **The Earth Through Time (GOL 132) - Four semester hours, three hours lecture, two hours laboratory per week. This course includes the history and development of the continents and ocean basins, and the evolution of life on Earth; as well as earthquakes and the Earth's interior, mountain building, drifting continents and seafloor spreading, the ice ages, space science, and oceanography. Required lab fee. No prerequisites.**
7. Number of semester credit hours: **4**
8. Estimated total course enrollment per year: **150**
9. Course prerequisites and/or required qualifications for enrolling in the class: **TSI Complete**
10. Course **is not/will not be** available online.
11. Foundational Component Area: **Life and Physical Sciences**
12. Explain why this course fits into this foundation component area: **The Earth Through Time is the scientific study of the earth's genesis and evolution. In this course, students will be introduced to and apply the scientific method to evaluate hypotheses regarding the earth's formation, and interpret the dynamic environment that has evolved over the earth's history.**
13. Core Objectives
    - Critical Thinking - Students will be introduced to the critical thinking skills in the form of the scientific method through laboratory exercises led by the instructor, writings and examples within the laboratory manual, and practical examples within the laboratory period. Instructions on critical thinking will be introduced during the first week of laboratory exercises and used to identify the various methods of fossilization and plant fossils. In subsequent weeks, these critical thinking tools will also be applied to other laboratory exercises in order to help students synthesize published scientific data, calculate and use their own acquired data, and analyze the interactions between geologic phenomena. Students will be required to utilize critical thinking skills in each of the laboratory exercises; they will use these skills to form hypotheses about the identification of fossils from various time periods throughout the Earth's history, evolutionary trends of different life forms, the principles of understanding geologic time, and the understanding of geologic structures through the interpretation of geologic maps.
    - Communication Skills - Instructions on oral, written, and visual communication skills will be introduced during the second week of laboratory exercises with a partnered exercise. Students will work with partners throughout the semester, enhancing the oral communication skills through various laboratory exercises. Students will also be instructed on the presentation of scientific data in written and visual form by the laboratory instructor, by writings and examples within the laboratory manual, and by a handout, "Reporting Scientific Information". Students will demonstrate written and visual communication skills in various laboratory exercises, and as part of the group project in the Seafloor Spreading and Magnetism group exercise. This project will help students create a digital representation of the data associated with rates of seafloor spreading. Students will follow proper science format, which will include written paragraphs, graphic representation of the data, and evaluation and synthesis of the results.
    - Empirical and Quantitative Skills - Students will be introduced to empirical and quantitative skills during the second week of laboratory exercises by the instructor, through writings and examples in the laboratory manual, and through structured exercises during the laboratory period. Throughout the semester, the students will be asked to manipulate various data sets to calculate biostatistical parameters with reference to fossil communities in ancient geologic environments. Students will use these data to determine evolutionary trends over time, sinuosity of suture patterns, and the biodiversity of fossil communities. Students will also learn to calculate the half-lives and ages of geologic materials (Relative and Absolute Age Relationships Laboratory), determine the rates of Seafloor Spreading and relative movements of the continents (Seafloor Spreading and Magnetism Laboratory), and solve basic structural problems using empirical and quantitative

skills (Structural Geology – Faults Laboratory). These skills will be reinforced throughout the semester with various laboratory exercises facilitated by the instructor and through embedded assessments in the Evolutionary Trends of Phylum Mollusca Laboratory, biostatistical analyses of Phylum Echinodermata, the Relative and Absolute Age Relationship Laboratory, and the Structural Geology - Faults Laboratory. Skills will be reinforced throughout the semester by laboratory exercises and students will be asked to calculate and analyze scientific data in the form of electronic quizzes through the d2l platform.

- Teamwork - Students will be instructed on working as a team during the second week of laboratory. Throughout the semester, they will work in teams of 2-4 to complete various laboratory exercises. Students will work practical exercises during laboratory, fostering good teamwork amongst the students. Instructor support, as well as written instructions in the form of handouts and writings in the laboratory manual, will foster communication within their respective groups as they work together to complete the assignments. Students will continue to work in teams throughout the semester in various laboratory exercises, and also within a group project during week 10 in the Seafloor Spreading and Magnetism Laboratory. Handouts and classroom discussion will help facilitate the teamwork process and laboratory instructors will encourage participation and good teamwork.

14. Email the syllabus for this course to brewersj@sfasu.edu. Please include the course prefix, course number and the word "Syllabus" in the file's title (e.g. PSC 141 Syllabus).
    - The syllabus must meet the SFASU Course Syllabus Guidelines as published by the Provost/VPAA. A link to these guidelines can be found at http://www.sfasu.edu/acadaffairs.
    - Student learning outcomes should be clearly specified in the syllabus. These are course objectives—describing what students who complete the course will know or be able to do. Required core objectives (see above and Appendix 2) should be represented in the student learning outcomes.
    - A course calendar should be included in the syllabus. The calendar should list the topics that the course will cover and indicate the approximate amount of time to be devoted to each, either by percent of course time or number of weeks. The outline should indicate which topics will be required in all sections of the course and which may vary. If time in the course is to be specifically devoted to the required core objectives (see above and Appendix 2), that should be indicated in the course calendar.

Contact person for questions about this submission:

a. Mindy Shaw Faulkner
b. 936-468-2236
c. mgshaw@sfasu.edu

A separate description of the institution-level assessment procedures to be used for the core curriculum will be distributed by the Core Curriculum Assessment Committee. Course acceptance by the Core Curriculum Advisory Committee does not guarantee acceptance by the Core Curriculum Assessment Committee. Approval by both committees is required for a course to be included in the core.

Department chairperson signature:
_____ Date:_____

College dean signature:
_____ Date:_____