I. Course Number and Title:

ESC102 – Evolution of Earth and Life

II. Catalog Description:

Introduction to evolutionary aspects of geology, development of continents, mountains and basins through the ages, and the parallel evolution of plants and animals. Laboratory stresses fossil relationships and stratigraphic problems. Field trips include fossil collecting. (3 hrs. lecture, 2 hrs. laboratory.) Offered on: A-E-G / 4 cr. hrs.

4.000 Credit Hours
3.000 Lecture hours
2.000 Lab hours

III. *Learning Outcomes: (Main concepts, principles, and skills you want students to learn from this course) The Learning Outcomes listed here should be considered the minimum core outcomes for the course. Many other learning outcomes may also be a part of the learning experience within the course.

Upon completion of this course, students will be able to:

- Describe the origin of the universe
- Understand the origin and composition of the earth
- Distinguish between igneous, metamorphic and sedimentary rocks
- Understand plate tectonics
- Interpret ancient sedimentary environments based on sedimentary structures such as cross bedding, graded bedding, ordinary bedding, ripples, and mudcracks
- Interpret earth history from sedimentary beds, rock units, or other bodies of rock using relative dating techniques
- Describe possible theories on the origin of the solar system and the formation of earth
- Describe theories on the origin of the earth’s internal structure, its oceans, and atmosphere
- Describe the various methods of fossilization
- Describe the doctrine of organic evolution and evidence supporting it

*These statements must appear verbatim in course outlines. However, additional outcomes may be added to individual course outlines at the instructor’s discretion.

Revised 1/10
• Use fossils to recognize units of rock deposited during particular increments of geologic time and to reconstruct paleoenvironments
• Describe the geologic history and the record of life (with an emphasis on North America) during the Hadean, Archean, Proterozoic, and Phanerozoic eons

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Name of Discipline Lead:__________________________________

Discipline Vote:
For__________ Against__________ Abstention__________

Date of Vote:__________

_(Initial and Date)_________ Certification of Vote by AVP of Academic Affairs
_(Initial and Date)_________ Certification of Vote by College Curriculum Chair

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Revised 1/10