Graduates from the B.S. and B.A. programs in Geology will have acquired:

(KSU knowledge group):

1. A basic understanding of mathematics, chemistry, and physics, together with an appreciation that geology is an applied science built upon these foundation blocks.

2. Knowledge of basic earth materials, including their elemental composition, their normal occurrence as ions, molecules, minerals, and rocks, and their physical and chemical properties.

3. An understanding of plate tectonics and its results, including mountain building, isostasy, and volcanism.

4. An understanding of the origins and evolution of igneous, sedimentary, and metamorphic rocks.

5. An understanding of earth-surface processes, including hydrologic cycles, landform evolution, marine sedimentation, and basin development.

6. An understanding of the origin and evolution of life on earth.

7. A broad appreciation for other fields of knowledge, as derived from KSU's distribution requirements and general education program.

(KSU critical thinking group):

8. An ability to apply fundamental geological techniques, such as field mapping and petrographic analysis, toward the resolution of geological problems.

9. An appreciation of the types of problems that might be faced in a number of specialized fields within geology, such as paleoenvironmental reconstruction, petroleum exploration, and groundwater systems.

10. An appreciation of the types of problems that might be studied by geochemists, such as the dating of igneous rocks or metamorphic events, and of the methods and instruments that might be used in such studies.

11. An appreciation of the types of problems that might be studied by geophysicists, such as the location of active faults, and of the methods and instruments that might be used in such studies.

12. Familiarity and competence in the application of computers to geological problems.

13. An understanding of simple statistics and an appreciation for the significance of data.

14. Some ability to think in three and four (time) dimensions.

(KSU communication group):

15. Competence in the preparation of written reports from field and lab experiences.

16. An understanding of how to use graphical methods to summarize and present numerical data.

17. Competence in the preparation and delivery of oral presentations in classroom situations.

(KSU diversity group):

18. An appreciation for the diverse career opportunities within the geological sciences, and for the challenges involved in the application of a global science to a multinational world.

19. An ability to work well with others, in classroom, laboratory, and field projects.

(KSU ownership of learning group):

20. A competence in information retrieval, from print, database, and web-based resources.

21. An appreciation of the responsibilities involved in utilizing information resources, including accuracy, intellectual property rights, and plagiarism.

(KSU diversity & ownership of learning groups):

22. Experience in networking with others, such as participation in professional societies.

23. A recognition of the need for geologists to improve public awareness of the importance of this field to society.