

Content Preparation Update Worksheet Earth Science

Applicant Name: _____

Date: _____

At the time of your admission into the program, you were asked to complete an “Admission Transcript Review Worksheet”, to help evaluate the extent to which your content preparation fulfilled both New York State certification requirements and relevant professional organization standards and, when needed, to let you know what additional coursework and/or other experiences would need to be completed by graduation. As you are now at the end of your program, we would like you to use this “Update” worksheet to document that you have completed all the additional experiences agreed upon at the time of admissions (if any), and also to identify other learning opportunities you had throughout your program to deepen your proficiency in specific content preparation standards. This will give the reviewer a complete picture of your content preparation at completion of your teacher preparation program.

(A) Relevant Subject Matter Coursework since Admission Review

In the table below, please report the required information for ALL the relevant subject matter coursework that you have completed and/or taken since your admission review, if any (this should include courses M.A.T. students have taken in The College):

Notes	Course Number	Course Title	Credit Hours	Grade	Sem. taken	Institution where the course was taken

Current cumulative total # credit hours in science: _____

Current cumulative total # credit hours in earth science: _____

(Include in this total relevant credits taken prior to matriculation in the program, as well as those listed in the table above)

(B) Professional Organization Recommendations

In the table below, please indicate relevant experiences that occurred after your admission into the teacher preparation and contributed to your learning with respect to each of the content preparation standards identified by the National Science Teachers Association (NSTA) -- including opportunities you had in the context of courses taken as part of your teacher preparation program:

Competency requirements – unifying concepts	Relevant coursework or other experiences:	Comments
1. Multiple ways we organize our perceptions of the world and how systems organize the studies and knowledge of science		
2. Nature of scientific evidence and the use of models for explanation.		
3. Measurement as a way of knowing and organizing observations of constancy and change.		
4. Evolution of natural systems and factors that result in evolution of equilibrium.		
5. Interrelationships of form, function, and behaviors in living and nonliving systems.		

Competency requirements – Earth Science core competencies	Relevant coursework or other experiences:	Comments
1. Characteristics of land, atmosphere, and ocean systems on Earth.		
2. Properties, measurement, and classification of Earth materials.		
3. Changes in the Earth including land formation and erosion.		
4. Geochemical cycles including biotic and abiotic systems.		
5. Energy flow and transformation in Earth systems.		
6. Hydrological features of the Earth.		

Competency requirements – Earth Science core competencies	Relevant coursework or other experiences:	Comments
7. Patterns and changes in the atmosphere, weather, and climate.		
8. Origin, evolution, and planetary behavior of Earth.		
9. Origin, evolution, and properties of the universe.		
10. Fundamental processes of investigating in the Earth and space sciences.		
11. Sources and limitations of natural resources.		
12. Applications of Earth and space sciences to environmental quality and to personal and community wealth and welfare.		

Competency requirements – Earth Science advanced competencies	Relevant coursework or other experiences:	Comments
13. Gradual and catastrophic changes in the Earth.		
14. Oceans and their relationship to changes in atmosphere and climate.		
15. Hydrological cycles and problems of distribution and use of water.		
16. Dating of the Earth and other objects in the universe.		
17. Structures and interactions of energy and matter in the universe.		
18. Impact of changes in the Earth on the evolution and distribution of living things.		

Competency requirements – Earth Science advanced competencies	Relevant coursework or other experiences:	Comments
19. Issues related to changes in Earth systems such as global climate change, mine subsidence, and channeling of waterways.		
20. Historical development and perspectives in the Earth and space sciences, including contributions of significant figures and underrepresented groups, and the evolution of theories in these fields.		
21. How to design, conduct and report research in the Earth and space sciences.		
22. Applications of the Earth and space sciences and related technologies in society, business, industry and health fields.		

Competency requirements – Earth Science supporting competencies	Relevant coursework or other experiences:	Comments
23. Biology, including evolution, ecology, population dynamics and the flow of energy and materials through Earth systems.		
24. Chemistry, including broad concepts of inorganic, organic, and physical chemistries, and biochemistry; and basic laboratory skills.		
25. Physics, including electricity, forces and motions, energy, magnetism, thermodynamics, optics, and sound; as well as basic quantum theory.		
26. Mathematics, including statistics and probability.		