



Program Review Document

Preparation Program: *Secondary Earth Science Education*

Date Submitted: *May, 2017*

Certification Level:	<input type="checkbox"/> B-P <input type="checkbox"/> P-5 <input type="checkbox"/> 5-9 <input type="checkbox"/> 5-12 <input checked="" type="checkbox"/> 8-12 <input type="checkbox"/> P-12
Preparation Level:	<input checked="" type="checkbox"/> Initial
Modes of Delivery:	<input type="checkbox"/> Face-to-Face Only <input type="checkbox"/> Online Only <input checked="" type="checkbox"/> Hybrid
Degree Type:	<input checked="" type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate (MAT) <input checked="" type="checkbox"/> Undergraduate – Cert Only <input type="checkbox"/> Option 6
Program Codes:	676 774
University Catalog:	https://www.wku.edu/undergraduatecatalog/ http://catalog.wku.edu/graduate/
WKU Quality Assurance Document:	http://www.wku.edu/cebs/caep/

SYLLABI: All Professional Education, Methods Syllabi, and a Sampling of Content Area Syllabi are available on the WKU website http://www.wku.edu/cebs/peu/epsb_prds.php.

Program Description

The Earth and Space Science Certification program (Grades 8 through 12) leads to initial certification. The program requires a 20-hour core of Geology courses, plus 12 hours of required and approved geology electives. In addition, 22 hours of cognate science, math, and computer science are required, summing to 54 hours of content-area coursework. Core concepts and principles are emphasized in the classroom and are supported by laboratory and field experiences. These experiences help students connect and integrate their core knowledge, sharpen their problem solving skills, and learn to become part of a team as well as function independently. Students develop an understanding of the scientific method and how to develop hypotheses and models in the introductory courses. Students acquire new knowledge and learn to integrate core concepts of Earth and Space Sciences in all 300 and 400 level courses. The program provides students with broad content knowledge in the sciences and successfully prepares them to synthesize information; present research results, and communicates ideas and technical concepts to a broad range of audiences.

- Core Education Courses**

SMED 101. STEP 1: INTRODUCTION TO INQUIRY-BASED APPROACHES TOTEACHING. (1 hr) Introduction to theory and practice necessary to design and deliver high quality inquiry-based math and science instruction. Students explore and practice the guided inquiry process, create lesson plans and implement them during visits to elementary classrooms. Fieldwork required.

SMED 102. STEP 2: INTRODUCTION TO INQUIRY-BASED LESSON DESIGN. (2 hrs) Further exploration of inquiry-based learning experiences, developing skills designing, teaching, analyzing, and assessing inquiry-based math and science lessons. Students design lesson plans and implement them during visits to middle school classrooms. Fieldwork required.

SMED 300. MIDDLE GRADES SCIENCE SKILLS AND METHODS. (3 hrs) Laboratory-based introduction to the science skills and methods needed by middle school teachers.

SMED 301. DESIGNING AND TEACHING INQUIRY-BASED MATHEMATICS AND SCIENCE UNITS. (3 hrs) Develops students' skills in designing, teaching, analyzing, and assessing inquiry-based math and science lessons and units within multiple and diverse field experiences. Fieldwork required.

SMED 310. KNOWING AND LEARNING IN MATHEMATICS AND SCIENCE. (3 hrs) Introduction to theories and principles of cognition and learning with emphasis on knowing and learning in math and science. Introduction to research on learning, memory, individual development, motivation and intelligence. Applications of learning theory will be explicitly tied to design of lesson plans, instruction and assessment.

SMED 320. CLASSROOM INTERACTIONS. (3 hrs) Designed to expand students' abilities to understand how learning theories are applied in instructional settings as students develop, implement and evaluate activities and strategies for teaching diverse students equitably. Fieldwork required.

SMED 340. PERSPECTIVES ON MATHEMATICS AND SCIENCE. (3 hrs) Introduction to the historical, social, and philosophical implications of math and science through investigations of pivotal experiments and findings. Includes integrated laboratory experiences that replicate significant discoveries.

SMED 360. RESEARCH METHODS FOR MATH AND SCIENCE TEACHERS. (3 hrs) Laboratory-based introduction to the tools and techniques used by scientists and mathematicians to further an understanding of the natural world and application of this knowledge to math and science education. Students will design and carry out laboratory investigations, and present written and oral reports of results.

SMED 400. APPLYING MIDDLE GRADE SCIENCE ACROSS DISCIPLINES. (3 hrs) Introduction to the knowledge and skills needed to create middle grades science lessons that incorporate content and real-world examples from different disciplines.

SMED 470. PROJECT-BASED INSTRUCTION. (3 hrs) Methods, techniques, and technologies used to implement and assess problem-based investigations in math and science classrooms. Fieldwork required.

SMED 489. SMED STUDENT TEACHING SEMINAR. (3 hrs) Provides a bridge between the theory and practice of math and science teaching. Methods, techniques, technologies and issues pertinent to math and science instruction in middle grade and secondary classrooms. Field experiences in public schools and/or other appropriate settings away from campus are required.

LTCY 421. CONTENT AREA READING IN THE MIDDLE AND SECONDARY GRADES. (3 hrs) A course in reading designed to offer a detailed view of the principles, materials and methods of instruction for middle and secondary grade students. Field experiences in public schools and / or other appropriate settings away from campus are required.

SPED 330. INTRODUCTION TO EXCEPTIONAL EDUCATION: DIVERSITY IN LEARNING. (3 hrs) Characteristics of exceptionality, special education programs, schools, and community resources and research relative

to exceptionalism. Field experiences in public schools and / or other appropriate settings away from campus are required in this course.

SEC 490. STUDENT TEACHING. (10 hrs) Must complete a minimum of sixteen weeks in one or two placements depending on certification requirements. Students follow the academic calendar of the school district in which they are placed and are responsible for providing their own transportation to assigned site(s).

- **Core Content Courses**

GEOL 111 – The Earth. The study of Earth, including rocks, mineral resources, energy, soils, surface geologic processes, earthquakes and Earth's interior, global tectonics, hydrology, and environmental geology. Students electing to meet their general education laboratory requirement through GEOL 113 must simultaneously enroll in the GEOL 111 lecture course. Laboratory required for geology majors, minors, and some prospective science teachers, but is optional for most others.

GEOL 112 – Earth History. Geologic study of Earth history: major land, sea, and life patterns throughout geologic time. Topics include the development of geology as a science, nature and significance of the fossil record, basic stratigraphic relations, theories concerning the origin of Earth and the solar system, prehistoric life, paleogeography, and global tectonics. Students electing to meet their general education laboratory requirement through GEOL 114 must simultaneously enroll in GEOL 112. The associated laboratory is required for geology majors, minors, and some prospective science teachers but is optional for most others.

GEOL 113 – The Earth Lab. Corequisite: GEOL 111 Laboratory work designed to accompany GEOL111. Minerals, rocks, topographic maps, geologic maps, and aerial photographs are studied. This laboratory is required for geology majors and minors and some prospective science teachers, but is optional for most others.

GEOL 114 – Earth History Lab. Prerequisite or Corequisite: GEOL 112 Laboratory work designed to accompany GEOL 112. Sedimentary rocks, fossil specimens, stratigraphic concepts, and geologic maps are studied. This laboratory is required for geology majors and minors and some prospective science teachers, but is optional for most other students.

GEOL 360 – Sedimentation and Stratigraphy. Prerequisite: GEOL 380. Introduces sedimentary processes, including sediment origins, erosion, transportation, deposition, and diagenesis. Sedimentation patterns and stratigraphic architecture are studied in the context of depositional and tectonic settings.

GEOL 380 – Intro to Field Techniques. Prerequisites: GEOL 111 and GEOL 113 Prerequisites or Corequisites: GEOL 112 and GEOL 114 Techniques of geological field work. Topics include sampling, rock identification and description, field notes, and the transition from field to laboratory analysis. Field work is required.

GEOL 408 – Structural Geology. Prerequisites: GEOL 111 and 113, and MATH 116 or higher. This course introduces the mechanics, characteristics, occurrences, and resultant structures associated with the major processes of deformation of the earth's crust. Major structural regions of North America are discussed. The laboratory emphasizes graphical and mathematical solutions of structural problems. Field trip required.

GEOL 499 – Professional Preparation. Prerequisite: Senior standing Professional career preparation in geology including senior assessment, resume writing, college-to-career transition, professional ethics, and selected seminar topics. Outside speakers from industry and academia will be included.

- **Required Electives**

GEOL 311 – General Oceanography. Prerequisite: GEOL 102 or GEOL 111 or permission of instructor
A course in basic fundamentals pertaining to the geological, chemical, physical and biological aspects of the marine environment. Topics for discussion include the topography, structure and history of the ocean basins and their margins, ocean waters and oceanic circulation, tides and waves, marine geochemistry, ocean sediments and sedimentation, near-shore geologic processes and the ocean as a biogeochemical system. The resources of the ocean and the influence of man are also considered.

GEOL 325 – Intro to Minerals and Rocks. Prerequisite: GEOL 102 or GEOL 111. The sight identification of minerals and rocks is stressed. The description, origin and classification, economic uses, and occurrences of the major mineral and rock groups are discussed. Appropriate rock and mineral specimens are examined in the laboratory.

GEOG 121 – Meteorology

ASTR 104. ASTRONOMY OF THE SOLAR SYSTEM. (3) An introductory study of that portion of the physical universe extending beyond the earth from the sun to the outer limits of the solar system, including its relationship to the rest of the universe and to the earth. Topics include phenomena visible from earth, the earth's motions and timekeeping, eclipses, motions of planets and satellites, and the historical development of scientific understanding of the solar system. Comparison of physical properties among the sun, planets, and satellites interrelate the earth and its life forms with the extraterrestrial environment that supported the development and continuation of life on earth. This course contains an integral laboratory that includes planetarium exercises and evening observing sessions using telescopes. Colonnade E-NS (SL) | NS | SL

ASTR 106. ASTRONOMY OF STELLAR SYSTEMS. (3) An introductory study of that portion of the physical universe in the space beyond the bounds of the solar system. Topics include the physical properties of stars and stellar systems, stellar formation and evolution, supernovas, pulsars, galaxies, quasars, black-holes, and cosmology—scientific theories of the origin, evolution, and fate of the universe on the grandest scale. Emphasis is given to the significance of these topics to the development and fate of the earth and its star. This course contains an integrated laboratory that includes planetarium exercises and evening observing sessions using telescopes. Colonnade E-NS (SL) | NS | SL

ASTR 405 – Astronomy for Teachers

PHYS 201. COLLEGE PHYSICS I. (4) Prerequisites: High School algebra, geometry and right triangle trigonometry. An introductory course for students majoring in the applied sciences, emphasizing the application of basic physics principles through problem solving. Topics covered include mechanics, heat and thermodynamics, properties of matter and waves. Includes both lecture and laboratory components. (No calculus is used). Colonnade E-NS (SL) | NS | SL

MATH 116 / MA 116C. COLLEGE ALGEBRA. (3) Prerequisites: Math ACT score of 22 or better or Math SAT score of 510 or better or a score of 14 or better on the WKU Math Placement Exam or a score of 14 or better on the KYOTE or a score of 50 or better on the COMPASS (College Algebra domain) or DMA 096C with a grade of "C" or better. Graphing and problem solving are integrated throughout the study of polynomial, absolute value, rational, radical, exponential, and logarithmic functions. (Graphing calculator required.). Colonnade F-QR | QR

- **Other Approved Electives**

GEOL 270. ANALYTICAL TECHNIQUES IN GEOLOGY. (3) Prerequisites: GEOL 111 and 112 or permission of instructor. Basic analytical techniques used to examine and analyze Earth materials. Topics include precision and accuracy, sample preparation, contamination, calibration techniques, analysis of data sets. Course Fee

GEOL 310. GLOBAL HYDROLOGY. (3) Prerequisite: GEOL 111 or GEOG/GEOL 103. An introduction to descriptive and quantitative hydrology. The hydrologic cycle precipitation, evaporation, and transpiration are covered under descriptive hydrology. Hydrographs, runoff relations, groundwater, and storage routing are covered under quantitative hydrology. Equivalent to GEOG 310.

GEOL 330. MINERALOGY. (4) Prerequisites: GEOL 111 and 113 and one semester of college chemistry or permission of the instructor. The systematic study of minerals. Includes crystallography, crystal chemistry, mineral stability, the classification of minerals, and the origin, characteristics and occurrences of the major mineral groups. Laboratory work includes crystal symmetry, mineral identification, and an introduction to the optical microscope. A field trip may be required. Course Fee

GEOL 350. PETROLOGY. (4) Prerequisite: GEOL 330. The study of the origin, characteristics, occurrence, and classification of igneous and metamorphic rocks, and of the processes that lead to their formation. Their occurrence in relation to plate tectonics is stressed. Laboratory work includes petrographic study of igneous and metamorphic rocks in hand specimen and in thin section. A field trip is required. Course Fee

GEOL 405. PALEONTOLOGY. (4) Prerequisites: GEOL 112 and 114 and BIOL 122 and 123 or permission of instructor. A basic course in paleobiology including the nature of the fossil record, preservation, basic factors and theories relating to the origin and development of living systems and the process of evolution, the species concept, systematics, and paleoecology. Major invertebrate taxa with a significant fossil record are also studied. Laboratory work includes the examination, description, and classification of fossil specimens. Course Fee

GEOL 420. GEOMORPHOLOGY. (4) Prerequisite: GEOL 111 or GEOG / GEOL 103. The study of the origin, history, and characteristics of landforms produced by fluvial, glacial, wind, and wave erosion and mass-wasting and ground water or by combination of these, acting upon the major types of earth materials and structures. Laboratory work includes the interpretation of topographic and geologic maps, air photos, and stereo pairs. A field trip may be required. Equivalent to GEOG 420.

GEOL 485. GEOLOGY OF FOSSIL FUELS. (3) Prerequisite: GEOL 408 or permission of instructor. Formation of coal, petroleum and natural gas including depositional setting, source materials and processes of thermal maturation. Stratigraphic and structural relations, modes of occurrence, exploration techniques and resource evaluation are emphasized. Field trip required.

1. INITIAL PREPARATION EARLY FIELD AND CLINICAL EXPERIENCES: The table below delineates the alignment between program courses and the EPSB required categories for early field and clinical experiences.

Course Name	Hours	School Level			EPSB REQUIRED EXPERIENCES CATEGORIES							
		ELEM	MIDDLE	HIGH	a. Engage with diverse students	b. Observe in Family Resource or Youth Services Center	c. Tutor	d. Interact with student families	e. Attend school board	e. Attend school-based council	f. Participate in professional learning community	g. Assist teacher/ other school professionals
SMED 101	30	X			X	X					X	X
SMED 102	30		X		X	X						X
SMED 310	20		X	X	X	X						X
SMED 320	40		X	X	X	X						X
SMED 340	20		X	X	X					X		X
SMED 360	20		X	X	X							X
SMED 470	40		X	X	X		X	X	X		X	X
SPED 330	15		X	X	X	X		X				
LTCY 421	15			X	X		X					X
Total Hours	230											

Note: Memorandums of Agreement with P-12 school partners are located under the CAEP Standard 2 link: <http://www.wku.edu/cebs/caep/>.

2. KENTUCKY TEACHER PERFORMANCE STANDARDS ALIGNMENT: The table delineates how the EPP-wide Initial Preparation Key Assessments, aligned to both Kentucky Teacher Performance and InTASC Standards, are embedded in the program.

KEY ASSESSMENTS					
AREA		NAME	STANDARD ALIGNMENT		COLLECTED
			KTS	InTASC	
1	Content Assessment	Praxis II	(1)*	(4,5)	Praxis Report
2	Other Content Assessment	Major GPA	(1)	(4)	Prior to Student Teaching
3	Assessment of Professional Capabilities	Praxis PLT	(2-10)	(1-3,6-10)	Praxis Report
4	Clinical Experiences Measure of Teaching Proficiency	Student Teacher Evaluation	1-10	1-10	SEC 490
5	Measure of Assessment Proficiencies	A: Learning Goals & Pre/Post Assessment B: Analysis of Student Learning	1-3,5-7	1-10	SMED 320
6	Ability to Diagnose and Prescribe for Personalized Student Learning	Design for Instruction	1,2,5,6	1,4-10	SMED 470
7	Application of Content Knowledge and Pedagogical Skills	Teacher Work Sample	1-3,5-7,9	1-10	SMED 489
8	Assessment of Literacy Outcomes	Operational Stance Concerning Content-Area and Discipline-Specific Literacies	1,2,5	1,4-7	LTCY 421
9	Dispositions	Dispositions Form	NA	NA	SMED 102, SMED 320, SMED 470, SEC 490
10	KTS Exit Survey	KTS Exit Survey	1-10	1-10	SMED 489

*Assessments are theoretically aligned to standards; however, results cannot be disaggregated into distinct standards for reporting and analysis.

4. CURRICULUM CONTRACT:



**Undergraduate Degree Program – B.S., Geology – Earth and Space Science Concentration (Reference #676)
B.S., Science and Math Education (Reference #774)**

Leading to Initial Teacher Certification (Rank III) in Secondary Earth Science Education, Grades 8-12

Admission Requirements:

To be admitted into this program, candidates must meet all minimal criteria described on the “Transition Points” page under “Transition Point 1: Admission to Education Preparation Programs.”

Science/Math Education Component—37 hours		Specialty Studies – Geology Major		
SMED 101 – Step 1	1 hr.	REQUIRED CORE GEOLOGY COURSES (Total = 21 hrs)		
SMED 102 – Step 2	2 hrs.	GEOL 111/113 - The Earth and Lab	4 hrs	
SMED 310 – Knowing & Learning	3 hrs.	GEOL 112/114 – Earth History and Lab	4 hrs	
SMED 320 – Classroom Interactions	3 hrs.	GEOL 360 –Sedimentology and Stratigraphy	4 hrs	
SPED 330 – Diversity in Learning	3 hrs.	GEOL 380 – Introductory Field Techniques	3 hrs	
SMED 340 – Perspectives	3 hrs.	GEOL 408 – Structural Geology	4 hrs	
SMED 360 – Research Methods	3 hrs.	GEOL 499 – Professional Preparation in Geology	2 hrs	
SMED 470 – Project-based Instruction	3 hrs.	REQUIRED GEOLOGY ELECTIVES (Total = 6 hrs)		
LTCY 421 – Reading for Middle/Second	3 hrs.	GEOL 311 – General Oceanography	3 hrs	
SMED 489 – Student Teaching Seminar	3 hrs.	GEOL 325 – Introduction to Minerals and Rocks	3 hrs	
SEC 490 – Student Teaching	10 hrs	APPROVED GEOLOGY ELECTIVES (Total = 6 hrs selected from this list)		
Colonnade Plan Component—39 hours		GEOL 270 – Analytical Techniques in Geology	3 hrs	
See WKU catalog website for guidance in selecting appropriate coursework to meet WKU’s Colonnade Plan requirements.		GEOL 310 – General Hydrology	3 hrs	
		GEOL 330 – Mineralogy	4 hrs	
		GEOL 350 – Petrology	4 hrs	
		GEOL 405 – Paleontology	4 hrs	
		GEOL 420 – Geomorphology	4 hrs	
		GEOL 485 – Geology of Fossil Fuels	3 hrs	
		ADDITIONAL REQUIRED ELECTIVES (Total = 19 hrs)		
		GEOG 121 – Meteorology	3 hrs	
		ASTR 104 – Astronomy of the Solar System	3 hrs	
		ASTR 106 – Astronomy of Stellar Systems	3 hrs	
		ASTR 405 – Astronomy for Teachers	3 hrs	
		PHYS 201 – College Physics (lecture and lab)	4 hrs	
		MATH 116 – College Algebra	3 hrs	
		Grand Total of Hours		127-128 hrs

Mid-Point Assessment Requirements:

To be admitted into the Student Teaching Semester, candidates must meet all minimal criteria described under “Transition Point 2: Admission to Final Clinical Experience.”

Program Completion Requirements:

1. To complete a teacher preparation program, candidates must meet all minimal criteria described under “Transition Point 3: Program Exit.”
2. Note that additional requirements (described below) must be met in order to be recommended for initial certification.
3. Rules and regulations governing the completion of this program of study have been described above and on the next page. By your signature, you are acknowledging that you understand and accept responsibility for meeting these requirements.

Delineation of EPP-Wide Transition Points – Initial Preparation Program

Transition Point 1: Admission to Education Preparation Programs				
Data Reviewed	Minimal Criteria	Review Cycle	Reviewed By	Approved By
Unit Level Data:	Admission to Teacher Education			
<ul style="list-style-type: none"> • Cumulative GPA • CASE test scores • Application to include: <ul style="list-style-type: none"> – 3 faculty recommendations – Physical (including TB test) – KY criminal background check – Signed KY Code of Ethics 	<ul style="list-style-type: none"> • 2.75+ average or above • Minimum CASE scores required as defined by current state guidelines (demonstrates Critical Thinking and Communication Skills) • 3 positive faculty recommendations (demonstrates their dispositions for teaching indicating their creativity and collaboration skills) • Passing physical • Passing background checks 	Each Month	Office of Teacher Services	Professional Education Council
Transition Point 2: Admission to Final Clinical Experience				
Data Reviewed	Minimal Criteria	Review Cycle	Reviewed By	
Unit Level Data	Successful application to Student Teaching			
<ul style="list-style-type: none"> • GPAs and at least 90+ hours completed (including 75% of content courses) • Completion of required field hours • Completion of Key Assessments • Dispositions scores 	<ul style="list-style-type: none"> • 2.75+ GPA (overall, major, minor, and professional education courses); C or higher in all professional education courses • At least 200 hours documented based on requirements of 16 KAR 5:040 • 2+ holistic score; 2+ per KTS measured • All dispositions average “At Standard” (3+) 	Each Semester	Office of Teacher Services	Professional Education Council
Transition Point 3: Program Exit				
Data Reviewed	Minimal Criteria	Review Cycle	Reviewed By	
Unit Level Data:	Program Exit			
<ul style="list-style-type: none"> • Candidate student teaching • Teacher Work Sample scores • Dispositions scores 	<ul style="list-style-type: none"> • C or Higher • 2+ holistic score; 2+ per KTS measured • All scores “At Standard” (3+) 	Each Semester	Office of Teacher Services	Certification Officer

To be recommended for initial certification, an applicant must document:

Completion of an approved educator preparation program in each desired certification area; Passing score(s) on the appropriate PRAXIS II and PLT exam(s) or other assessments required for each desired certification area; Achievement of at least a 2.75 GPA overall, in each major and minor, and in professional education courses; Attainment of at least a “C” in all professional education courses, including student teaching.

Remediation Opportunities:

TP 1: Candidates may continue to submit Faculty Recommendations until three are positive.

TP 2: Candidates may request additional instruction from faculty and may resubmit Key Assessments in order to improve their scores.

TP 3: Candidates may request additional instruction from faculty and may resubmit the Teacher Work Sample Key Assessment in order to improve their score. Candidates may repeat student teaching.

EPSB Disclaimer: Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov for current requirements or contact the Division of Professional Learning and Assessment at 502-564-4606 or toll free 888-598-7667.

By signing below, the candidate ensures that he or she has been advised of, understands, and agrees to adhere to all program requirements, including assessment requirements, of the program.

Candidate Name (printed):

Education Advisor's Signature/Date:

Signature

Date

Candidate Signature/Date:

Specialization Advisor's Signature/Date (if needed):

Signature

Date

Signature

Date

****END OF CURRICULUM CONTRACT****



Secondary Earth Science Education Certification Only
Non-degree seeking Certification Only in Secondary Earth Science Education, Grades 8-12
(This program does not lead to a degree)

Admission Requirements:

To be admitted into this program, candidates must meet all minimal criteria described on the “Transition Points” page under “Transition Point 1: Admission to Education Preparation Programs.”

Science/Math Education Component—37 hours		Specialty Studies – Geology Major	
SMED 101 – Step 1	1 hr.	REQUIRED CORE GEOLOGY COURSES (Total = 21 hrs)	
SMED 102 – Step 2	2 hrs.	GEOL 111/113 - The Earth and Lab	4 hrs
SMED 310 – Knowing & Learning	3 hrs.	GEOL 112/114 – Earth History and Lab	4 hrs
SMED 320 – Classroom Interactions	3 hrs.	GEOL 360 –Sedimentology and Stratigraphy	4 hrs
SPED 330 – Diversity in Learning	3 hrs.	GEOL 380 – Introductory Field Techniques	3 hrs
SMED 340 – Perspectives	3 hrs.	GEOL 408 – Structural Geology	4 hrs
SMED 360 – Research Methods	3 hrs.	GEOL 499 – Professional Preparation in Geology	2 hrs
SMED 470 – Project-based Instruction	3 hrs.	REQUIRED GEOLOGY ELECTIVES (Total = 6 hrs)	
LTCY 421 – Reading for Middle/Second	3 hrs.	GEOL 311 – General Oceanography	3 hrs
SMED 489 – Student Teaching Seminar	3 hrs.	GEOL 325 – Introduction to Minerals and Rocks	3 hrs
SEC 490 – Student Teaching	10 hrs	APPROVED GEOLOGY ELECTIVES (Total = 6 hrs selected from this list)	
		GEOL 270 – Analytical Techniques in Geology	3 hrs
		GEOL 310 – General Hydrology	3 hrs
		GEOL 330 – Mineralogy	4 hrs
		GEOL 350 – Petrology	4 hrs
		GEOL 405 – Paleontology	4 hrs
		GEOL 420 – Geomorphology	4 hrs
		GEOL 485 – Geology of Fossil Fuels	3 hrs
		ADDITIONAL REQUIRED ELECTIVES (Total = 19 hrs)	
		GEOG 121 – Meteorology	3 hrs
		ASTR 104 – Astronomy of the Solar System	3 hrs
		ASTR 106 – Astronomy of Stellar Systems	3 hrs
		ASTR 405 – Astronomy for Teachers	3 hrs
		PHYS 201 – College Physics (lecture and lab)	4 hrs
		MATH 116 – College Algebra	3 hrs

Mid-Point Assessment Requirements:

To be admitted into the Student Teaching Semester, candidates must meet all minimal criteria described under “Transition Point 2: Admission to Final Clinical Experience.”

Program Completion Requirements:

4. To complete a teacher preparation program, candidates must meet all minimal criteria described under “Transition Point 3: Program Exit.”
5. Note that additional requirements (described below) must be met in order to be recommended for initial certification.
6. Rules and regulations governing the completion of this program of study have been described above and on the next page. By your signature, you are acknowledging that you understand and accept responsibility for meeting these requirements.

Delineation of EPP-Wide Transition Points – Initial Preparation Program

Transition Point 1: Admission to Education Preparation Programs				
<i>Data Reviewed</i>	<i>Minimal Criteria</i>	<i>Review Cycle</i>	<i>Reviewed By</i>	<i>Approved By</i>
Unit Level Data:				
Admission to Teacher Education				
<ul style="list-style-type: none"> • Documentation of completion of baccalaureate degree in an approved certification area • Cumulative GPA • CASE test scores • Application to include: <ul style="list-style-type: none"> – 3 faculty recommendations – Physical (including TB test) – KY criminal background check – Signed KY Code of Ethics 	<ul style="list-style-type: none"> • Completion of Application • 2.75+ average or above • Minimum CASE scores required as defined by current state guidelines (demonstrates Critical Thinking and Communication Skills) • 3 positive faculty recommendations (demonstrates their dispositions for teaching indicating their creativity and collaboration skills) • Passing physical • Passing background checks 	Each Month	Office of Teacher Services	Professional Education Council
Transition Point 2: Admission to Final Clinical Experience				
<i>Data Reviewed</i>	<i>Minimal Criteria</i>	<i>Review Cycle</i>	<i>Reviewed By</i>	<i>Approved By</i>
Unit Level Data				
Successful application to Student Teaching				
<ul style="list-style-type: none"> • GPAs and at least 90+ hours completed (including 75% of content courses) • Completion of required field hours (dependent on current certification status) • Completion of Key Assessments • Dispositions scores 	<ul style="list-style-type: none"> • 2.75+ GPA (overall, major, minor, and professional education courses); C or higher in all professional education courses • At least 200 hours documented based on requirements of 16 KAR 5:040 • 2+ holistic score; 2+ per KTS measured • All dispositions average “At Standard” (3+) 	Each Semester	Office of Teacher Services	Professional Education Council
Transition Point 3: Program Exit				
<i>Data Reviewed</i>	<i>Minimal Criteria</i>	<i>Review Cycle</i>	<i>Reviewed By</i>	<i>Approved By</i>
Unit Level Data:				
Program Exit				
<ul style="list-style-type: none"> • Candidate student teaching • Teacher Work Sample scores • Dispositions scores 	<ul style="list-style-type: none"> • C or Higher • 2+ holistic score; 2+ per KTS measured • All scores “At Standard” (3+) 	Each Semester	Office of Teacher Services	Certification Officer

To be recommended for initial certification, an applicant must document:

Completion of an approved educator preparation program in each desired certification area; Passing score(s) on the appropriate PRAXIS II and PLT exam(s) or other assessments required for each desired certification area; Achievement of at least a 2.75 GPA overall, in each major and minor, and in professional education courses; Attainment of at least a “C” in all professional education courses, including student teaching.

Remediation Opportunities:

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By signing below, the candidate ensures that he or she has been advised of, understands, and agrees to adhere to all program requirements, including assessment requirements, of the program.

Candidate Name (printed):

Education Advisor's Signature/Date:

Signature

Date

Candidate Signature/Date:

Specialization Advisor's Signature/Date (if needed):

Signature

Date

Signature

Date

****END OF CURRICULUM CONTRACT****