

EARTH AND SPACE SCIENCE (BS) - SECONDARY EDUCATION TRACK

Program Map with Pre-Calculus

Course	Title	Credit Hours
First Year		
Fall		
Communicating in Writing	ENGL 1101 English Composition I (minimum grade of C)	3
Math and Quantitative Skills	MATH 1113 Ore-Calculus (minimum grade of C)	4
Field of Study Requirements	GEOL 1121 Introductory Geosciences I (minimum grade of C)	3
Field of Study Requirements	GEOL 1121L Introductory Geosciences I Lab (minimum grade of C)	1
Health and Wellness	PEDS Elective	1
Institutional Priorities	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002	3
Credit Hours		15
Spring		
Communicating in Writing	ENGL 1102 English Composition II (minimum grade of C)	3
Math and Quantitative Skills	MATH 1131 Calculus with Analytic Geometry (minimum grade of C)	4
Field of Study Requirements	GEOL 1122 Introductory Geosciences II: Historical Geology (minimum grade of C)	3
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
UTCH 1201	Step I: Inquiry Approaches to Teaching (minimum grade of C)	1
Institutional Priorities	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1
Credit Hours		15
Second Year		
Fall		
Technology, Math, and Sciences	CHEM 1211 Principles of Chemistry I (minimum grade of C)	3
Technology, Math, and Sciences	CHEM 1211L Principles of Chemistry I Lab (minimum grade of C)	1
POLS 1101	American Government	3
Social Sciences	World Culture	3
ATSC 1112	Understanding the Weather (minimum grade of C, Field of Study Requirements)	3
UTCH 1202	Step II: Inquiry-Based Lesson Design (minimum grade of C)	1

ASTR 1105	Descriptive Astronomy: The Solar System (minimum grade of C, Field of Study Requirements)	3
ASTR 1105 is taught only in the fall		
Credit Hours		17
Spring		
CHEM 1212	Principles of Chemistry II (minimum grade of C) (Technology, Math, and Sciences)	3
CHEM 1212L	Principles of Chemistry II Lab (minimum grade of C) (Technology, Math, and Sciences)	1
ATSC 5117U	Global and Climate Change (minimum grade of C, Program Requirements)	3
ATSC 5117U is taught only in the spring		
ENVS 1205K	Sustainability and the Environment (minimum grade of C) (Field of Study Requirements)	4
Arts, Humanities, Fine Arts and Ethics		3
UTCH 2105	Knowing and Learning in Mathematics and Science (minimum grade of C, Program Requirements)	3
Credit Hours		17
Third Year		
Fall		
PHYS 1111 or PHYS 2211	Introductory Physics I (minimum grade of C, Field of Study) or Principles of Physics I	3
PHYS 1111 is offered summer and fall; PHYS 2211 is spring only		
PHYS 1311 or PHYS 2311	Introductory Physics I Lab (minimum grade of C, Field of Study) or Principles of Physics I Lab	1
PHYS 1311 is offered summer and fall; PHYS 2311 is spring only		
UTCH 2203	Step III: Technological and Pedagogical Content Knowledge (minimum grade of C, Program Requirements)	3
UTCH 2203 if only offered in the fall.		
ASTR 3105 or ASTR 3115	Physics, Chemistry, and Geology of the Solar System (minimum grade of C, Program Requirements) or Introduction to Astrophysics	3
ASTR 3105 and ASTR 3115 are taught in the fall on a rotation basis.		
Choose one of the following (minimum grade of C, Major Electives):		4
ENVS 3105	Foundations of Environmental Science	
ENVS 5206U	Water Resources Management	
ENVS 5405U	Topics in Conservation	
Credit Hours		14
Spring		
PHYS 1112 or PHYS 2212	Introductory Physics II (minimum grade of C, Program Requirements) or Principles of Physics II	3

PHYS 1112 is offered summer and spring; PHYS 2212 is fall only.

PHYS 1312 or PHYS 2312	Introductory Physics II Lab (minimum grade of C, Requirements in the Major) or Principles of Physics II Lab	1
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PHYS 1312 is offered summer and spring; PHYS 2312 is fall only.

GEOL 4275 or GEOL 3201	Structural Geology (minimum grade of C, Major Electives) or Mineralogy and Petrology I	4
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Arts, Humanities, and Ethics

UTCH 3215	Research Methods (minimum grade of C)	3
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UTCH 3215 is a spring only course

UTCH 3205	Classroom Interactions (minimum grade of C)	3
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Credit Hours 17

Fourth Year

Fall

UTCH 4205	Inquiry-Based Instruction (minimum grade of C, Program Requirements)	3
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Choose one of the following (minimum grade of C, Major Electives)

GEOL 5255U	Environmental Geology	3-4
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ATSC 5125U	Severe and Hazardous Weather	
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ATSC 5116U	Meteorology	
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Choose one of the following (minimum grade of C, Major Electives):

GEOL 5135U	Oceanography	3-4
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GEOL 5165U	Hydrology	
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GEOL 5215U	Geomorphology	
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Social Science	Behavioral Science	3
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Elective Major credits as needed 2-0

PHED 1205 or KINS 1106	Concepts of Fitness or Lifetime Wellness	2
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Credit Hours 16

Spring

UTCH 4485	Student Teaching	9
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UTCH 4795	Student Teaching Seminar (minimum grade of C)	1
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SPED 4115	Teaching Math and Science to Exceptional Learners (minimum grade of B; see note below)	2
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There is a recent rule change for certification from the GaPSC. As of July 1, 2019, students must make a B or higher in the Exceptional Children's course. The course could be any of the following depending on your major: SPED 2256, EDCI 6228, KINS 4245, SPED 4115, PHED 6219. This rule change will not affect your graduation but you cannot become a certified educator with the state of Georgia until you receive the grade of B or higher in this course.

NOTE: During student teaching, no courses other than those listed above should be taken.

Credit Hours 12

Total Credit Hours 123

- Please note: Many of these courses are only offered once a year, or once every 3-4 semesters, and many of them have prerequisites. While you can rearrange the order in which you take your courses, you should consult with your advisor to ensure that you will be able to take the courses in a timely manner so that you do not delay your graduation. This course map has been arranged so that the most commonly required prerequisites are scheduled in year 1 and year 2 to maximize options later.
- The program map illustrates appropriate coursework for completing a degree within 4 years, provided that course grades allow for earned credit. Please consult with your advisor to determine when courses can be switched out with others and taken in a different semester or sequence than illustrated, since not all courses are offered every semester.
- The map is for illustrative purposes only and does not constitute a legal contract on the part of CSU since degree requirements or course offerings could change. As always, check with your advisor.
- Prior to reaching 30 hours of credit, students must complete "Communicating in Writing" (ENGL 1101 English Composition I, ENGL 1102 English Composition II) with a "C" or higher grade in both classes and complete a math course (MATH 1001 Quantitative Skills and Reasoning or higher*) of the "Mathematics and Quantitative Skills" section of the core.
- As of Fall 2013, all undergraduate students are required each semester to meet the 2.0 institutional GPA standard for satisfactory academic progress.

Program Map with Calculus

Course	Title	Credit Hours
First Year		
Fall		
ENGL 1101	English Composition I (minimum grade of C)	3
MATH 1131	Calculus with Analytic Geometry I (minimum grade of C)	4
GEOL 1121	Introductory Geoscience I: Physical Geology (minimum grade of C, Field of Study)	3
GEOL 1121L	Introductory Geoscience I: Physical Geology Lab (minimum grade of C, Field of Study)	1
Health and Wellness	PEDS Elective	
Institutional Priorities	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002 (recommend COMM 1110)	3
Credit Hours		14
Spring		
ENGL 1102	English Composition II (minimum grade of C)	3

MATH 1132	Calculus with Analytic Geometry II (minimum grade of C)	4
GEOL 1122	Introductory Geo-sciences II: Historical Geology (minimum grade of C)	3
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
UTCH 1201	Step I: Inquiry Approaches to Teaching (minimum grade of C)	1
Institutional Priorities	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1

Credit Hours 15

Second Year

Fall

CHEM 1211	Principles of Chemistry I (minimum grade of C)	3
CHEM 1211L	Principles of Chemistry I Lab (minimum grade of C)	1
POLS 1101	American Government	3
Social Science	World Culture	3
ASTR 1105	Descriptive Astronomy: The Solar System (minimum grade of C, Field of Study)	3

ASTR 1105 is offered only in fall

ATSC 1112	Understanding the Weather (minimum grade of C, Field of Study)	3
UTCH 1202	Step II: Inquiry-Based Lesson Design (minimum grade of C)	1

Credit Hours 17

Spring

CHEM 1212	Principles of Chemistry II (minimum grade of C)	3
CHEM 1212L	Principles of Chemistry II Lab (minimum grade of C)	1
ATSC 5117U	Global and Climate Change (minimum grade of C)	3

ATSC 5117U is a spring only course

ENVS 1205K	Sustainability and the Environment (minimum grade of C, Field of Study)	4
Arts, Humanities, Fine Arts and Ethics		3
UTCH 2105	Knowing and Learning in Mathematics and Science (minimum grade of C)	3

Credit Hours 17

Third Year

Fall

PHYS 1111 or PHYS 2211	Introductory Physics I (minimum grade of C, Field of Study) or Principles of Physics I	3
PHYS 1311 or PHYS 2311	Introductory Physics I Lab (minimum grade of C, Field of Study) or Principles of Physics I Lab	1

PHYS 1111 is taught summer and fall; PHYS 2211 is taught spring only.
PHYS 1311 is taught summer and fall; PHYS 2311 is taught spring only,

UTCH 2203	Step III: Technological and Pedagogical Content Knowledge (minimum grade of C)	3
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UTCH 2203 is a fall only course

Program Requirement	Choose one of the following (minimum grade of C):	4
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ASTR 3105	Physics, Chemistry, and Geology of the Solar System	
ASTR 3115	Introduction to Astrophysics	

ASTR 3105 and ASTR 3115 have every other year rotation.

Program Electives	Choose one of the following (minimum grade of C):	3
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ENVS 3105	Foundations of Environmental Science	
ENVS 5206U	Water Resources Management	
ENVS 5405U	Topics in Conservation	

Credit Hours 14

Spring

PHYS 1112 or PHYS 2212	Introductory Physics II (minimum grade of C, Field of Study) or Principles of Physics II	3
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PHYS 1112 is taught summer and spring; PHYS 2212 is taught fall only.

PHYS 1312 or PHYS 2312	Introductory Physics II Lab (minimum grade of C, Field of Study) or Principles of Physics II Lab	1
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PHYS 1312 is taught summer and spring; PHYS 2312 is taught fall only.

Program Electives	Choose one of the following (minimum grade of C, 3 semester rotation):	3-4
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GEOL 4275	Structural Geology	
GEOL 3201	Mineralogy and Petrology I	

Arts, Humanities and Ethics	Humanities Elective	3
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UTCH 3215	Research Methods (minimum grade of C)	3
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UTCH 3215 is a spring only course

UTCH 3205	Classroom Interactions (minimum grade of C)	3
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Credit Hours 16-17

Fourth Year

Fall

UTCH 4205	Inquiry-Based Instruction (minimum grade of C)	3
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Program Elective	Choose one of the following (minimum grade of C)	3-4
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GEOL 5255U	Environmental Geology	
ATSC 5125U	Severe and Hazardous Weather	
ATSC 5116U	Meteorology	

Program Elective	Choose one of the following (minimum grade of C)	3-4
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GEOL 5135U	Oceanography	
GEOL 5165U	Hydrology	
GEOL 5215U	Geomorphology	

GEOL 5135 is taught summer; other courses offered every 3 semesters.

Social Science	Behavioral Science	3
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Program Electives	Program credits as needed (minimum grade of C)	0-2
PHED 1205 or KINS 1106	Concepts of Fitness or Lifetime Wellness	2

Credit Hours	14-18
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Spring

UTCH 4485	Student Teaching	9
UTCH 4795	Student Teaching Seminar (minimum grade of C)	1
SPED 4115	Teaching Math and Science to Exceptional Learners (minimum grade of B; see note below)	2

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Credit Hours	12
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Total Credit Hours	119-124
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