

**Bachelor of Science
Urban STEM Education Secondary**

120 credits - 121 credits

Foundations of Excellence		30 credits
ACES100	Achieving Career and Education Success	3
ENGL 109	Composition	3
ENGL 110	Advanced Composition	3
HIST 265	Survey of World History	4
HIST 270	Survey of American History	4
HUMN 101	Arts and Culture	3
MATH 120	College Mathematics	3
MATH 150	Pre-Calculus	4
SOSC 201	Diversity in Society	3
 Urban Education Core		 22 credits
UEDU 191	Tutoring in Urban Schools Service Learning	1
UEDU 192	Teacher Assist in Urban -Service Learning	2
UEDU 260	Developmental Psych in the Urban Context	3
UEDU 285	Teaching Diverse Learners	3
UEDU 325	Classroom Data & Assessment	3
UEDU 330	Multicultural Teaching Practices	3
UEDU 340	Using Technology to Enhance Learning	3
UEDU 495	Urban STEM Capstone	4
 Secondary Science Education Methods		 22 credits
UEDU 151-4	Service/Experiential Learning	0
UEDU 240	Literacy Methods	3
UEDU 240L	Literacy Methods Lab	1
UEDU 288	Instruction Plans and Delivery	3
UEDU 370	Advanced Secondary Science Methods	3
UEDU 374	MTTC Prep Course	3

UEDU 415	Inquiry Based STEM Curriculum Design	3
UEDU 425	Inquiry Based Urban STEM Methods	3
UEDU 438	STEM Literacy in Urban Classrooms	3

Choose one of the following concentrations

Secondary Integrated Science Concentration |121 credits 47 credits

BIOL 110	Foundations of Cell Biology	3
BIOL 110L	Foundations of Cell Biology Lab	1
BIOL 111	Organisms and Populations	3
BIOL 111L	Organisms and Populations Lab	1
BIOL 209	Techniques in Laboratory Sciences	4
BIOL 211	Microbiology	3
BIOL 211L	Microbiology Lab	1
CHEM 160	General Chemistry I	3
CHEM 160L	General Chemistry I Lab	1
CHEM 161	General Chemistry II	3
CHEM 161L	General Chemistry II Lab	1
CHEM 275	Chemistry Laboratory Safety	3
CHEM 320	Introduction to Physical Chemistry	3
CHEM 325	Instrumental Methods and Applications in the Chemistry Laboratory	3
GEOL 120	Astronomy	3
GEOL 140	Physical Geology	3
PHYS 210	Fundamentals of Physics I	3
PHYS 210L	Fundamentals of Physics I Lab	1
PHYS 220	Fundamentals of Physics II	3
PHYS 220L	Fundamentals of Physics II Lab	1

Chemistry Concentration | 120 credits 43 credits

BIOL110	Foundation of Cell Biology	3
BIOL110L	Foundation of Cell Biology Lab	1
CHEM 160	General Chemistry I	3
CHEM 160L	General Chemistry I Lab	1

CHEM 161	General Chemistry II	3
CHEM 161L	General Chemistry II Lab	1
CHEM 250	Organic Chemistry I	3
CHEM 250L	Organic Chemistry I Lab	1
CHEM 255	Organic Chemistry II	3
CHEM 255L	Organic Chemistry II Lab	1
CHEM 275	Chemistry Lab Safety	3
CHEM 310	Biochemistry	3
CHEM 310L	Biochemistry Lab	1
CHEM 320	Introduction to Physical Chemistry	3
CHEM 325	Chem Lab Instruments/Applications	3
CHEM 420	Quantitative Analysis	3
MATH215	Calculus I	4
PHYS100	Applied Physics	2
PHYS100L	Applied Physics Lab	1

Open Electives

3 Credits

Biology Concentration | 120 credits

43 credits

BIOL 110	Foundations of Cell Biology	3
BIOL 110L	Foundations of Cell Biology Lab	1
BIOL 111	Organisms and Populations	3
BIOL 111L	Organisms and Populations Lab	1
BIOL 209	Techniques in Laboratory Sciences	4
BIOL 211	Microbiology	3
BIOL 211L	Microbiology Lab	1
BIOL 336	Genetics	4
BIOL 354	Cell and Molecular Biology	3
BIOL 354L	Cell and Molecular Biology Lab	1
BIOL 382	Science Ethics	3
BIOL 430	Advanced Microbiology	3
BIOL 430L	Advanced Microbiology Lab	1
CHEM 160	General Chemistry I	3
CHEM 160L	General Chemistry I Lab	1

CHEM 161	General Chemistry II	3
CHEM 161L	General Chemistry II Lab	1
CHEM 310	Biochemistry	3
CHEM 310L	Biochemistry Lab	1

Open Electives **3 credits**

Math Concentration | 120 credits **35 credits**

MATH 205	Applied Linear Algebra	4
MATH 215	Calculus I	4
MATH 216	Calculus II	4
MATH 250	Discrete Structures	3
MATH 260	College Geometry	3
MATH 350	Differential Equations with Modeling	4
MATH 440	Mathematical Structures and Proofs	4
STAT 220	Introduction to Statistics	3
STAT 322	Inferential Statistics	3
UEDU 371	Secondary Math Instruction	3

Open Electives **12 credits**

Physics Concentration | 120 credits **43 credits**

CHEM 150	Foundations of Chemistry	3
CHEM 150L	Foundations of Chemistry Lab	1
MATH 205	Linear Algebra	4
MATH 215	Calculus I	4
MATH 317	Calculus III	4
MATH350	Differential Equations with Modeling	4
PHYS 210	Fundamentals of Physics I	3
PHYS 210L	Fundamentals of Physics I Lab	1
PHYS 220	Fundamentals of Physics II	3
PHYS 220L	Fundamentals of Physics II Lab	1
PHYS 320	Waves and Optics	3
PHYS 350	Electricity and Magnetism	3
PHYS 375	Modern Physics	3



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PHYS 420	Quantum Mechanics	3
PHYS 425	Into Nuclear Physics	3
Open Electives		3 credits