

**Transfer  
with  
Ease**

# Articulation Agreement

## BACHELOR OF SCIENCE: PHYSICS

**Catalog Year 2022 - 2023**

### Murray State College

### East Central University

#### Associate of Science—Chemistry (Physics)

#### Bachelor of Science—Physics

- BIO 1114 General Biological Science OR BIOL 1404 Principles of Biology
- COL 1211 Academic Success
- ENG 1113 English Comp I
- HST 1483 U.S. History to 1865 OR HST 1493 U.S. History since 1865
- MTH 1513 Pre Calculus\*
- MTH 1613 Plane Trigonometry\* **17 hrs.**
  
- CHM 1114 Gen Chemistry I\*
- ENG 1213 English Comp II
- HWP 1112 Personal Health
- MTH 2215 Calculus I w/ Analytic Geo\*
- —3 hrs. Cultural & Global Education **14 hrs.**
  
- MATH 2315 Calculus II w/ Analytical Geo \* <
- PHY 2015 Engineering Physics I\*
- PSY 1113 Intro to Psychology OR SOC 1113 Intro to Sociology
- SPC 1113 Fundamentals of Speech **16 hrs.**
  
- CHM 1214 General Chemistry II
- GVT 1113 American Federal Government
- PHY 2115 Engineering Physics II\*
- —3 Cultural & Global Education **15 hrs.**

- MATH 3033 Calculus & Analytic Geometry III
- PHYS 3813 Optics
- PHYS 3013 Modern Physics
- PHYS 4113 Electricity & Mag.—Field Theory
- —3 hrs. Elective
- —2 hrs. Elective **17 hrs.**
  
- CS 1113 Programming I\*
- PHYS 3113 Mechanics I
- PHYS 3412 Junior Physics Laboratory
- —3 hrs. Elective
- —3 hrs. Elective **14 hrs.**
  
- MATH 4113 Differential Equations
- PHYS 4513 Quantum Mechanics
- —6 hrs. Upper Level Elective
- —3 hrs. Upper Level Elective **15 hrs.**
  
- PHYS 4313 Intro to Nuclear Physics
- PHYS 3713 Thermodynamics
- —9 hrs. Elective **15 hrs.**

**Total Credit Hours 61 hrs.**

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\* Please, see chart on second page for course equivalencies.



**YOUR FUTURE - YOUR CHOICE**



# Course Equivalency Table

Murray State College	East Central University
CHM 1114 Gen Chemistry I	CHEM 1114 General Chemistry I
CHM 1214 General Chemistry II	CHEM 1214 General Chemistry II
MTH 1513 Pre Calculus	MATH 1513 College Algebra
MTH 1613 Plane Trigonometry	MATH 1713 Trigonometry
MTH 2215 Calculus I w/ Analytic Geometry	MATH 2825 Calculus and Analytic Geometry I
MATH 2315 Calculus II w/ Analytic Geometry >	MATH 3025 Calculus and Analytic Geometry II
PHY 1114 General Physics I	PHYS 1114 General Physics I
PHY 1214 General Physics II	PHYS 1214 General Physics II

## NOTES:

- ⇒ Articulated using MSC's A.S. for Science Chemistry (Physics) and without a Minor. A Minor is not required.
- ⇒ < Will transfer as course content but not for upper level credit: Student should meet with an ECU advisor for more information.
- ⇒ A student transferring with an Associate degree in Arts or Science from MSC fulfills ECU's general education requirement by transferring his or her credit to East Central University. Transferring credit for general education does not eliminate or otherwise affect any of the following ECU requirements: (1) prerequisites; (2) specific requirements in majors, minors, or related work in these areas; or (3) the requirements for teacher certification. General Education equivalencies can be found by referring to either the Oklahoma State Regents Transfer Matrix or the ECU Transfer Matrix. Both matrices can be found at [www.ecok.edu](http://www.ecok.edu) by clicking on *Admissions* and scrolling down to *Course Transfer Matrix*.
- ⇒ A student must earn at least 40 semester hours in upper-division courses (numbered 3000 or higher). A course taught at MSC may equate in content to an ECU 3000-4000 level course, but it will not be counted as part of the 40 hours of upper level courses.
- ⇒ A student must earn at least 60 semester hours, excluding physical activity courses, at a baccalaureate degree granting institution.
- ⇒ A Student must earn at least 124 credit hours that apply to an ECU Bachelor's degree.