UMKC School of Science and Engineering

BACHELOR OF ARTS IN PHYSICS, 2024-25

For more information about policies and requirements, please see the UMKC 2024-25 Catalog.

FIRST YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
MATH 210 Calculus I	4	MATH 220 Calculus II	4
GEFSE 101 First Semester Experience	3	PHYSICS 240 Physics for Scientists & Engineers I	5
ENGLISH 110 English I: Intro to Academic Prose	3	ENGLISH 225 English II: Intermed Academic Prose	3
GECRT-SC Critical Thinking in Natural & Physical Sci	3	General Elective	3
General Elective	3		
TOTAL	**16**	**TOTAL**	**15**

SECOND YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
MATH 250 Calculus III	4	PHYSICS 385L OR 476LW Physics of Electronics OR Advanced Laboratory Credits	3
PHYSICS 250 Physics for Scientists & Engineers II	5	Communication Requirement (COMM-ST 110, 140, 212 or 277)	3
CHEM 211/211L General Chemistry I	5	GECRT-AH Critical Thinking in Arts & Humanities	3
General Elective	3	GECRT-SS Critical Thinking in Social & Behavioral Sciences	3
		Constitution Requirement (HISTORY 101, 102, POL-SCI 210, CJC 364 or HON 230)	3
TOTAL	**17**	**TOTAL**	**15**

THIRD YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
PHYSICS 310 Mechanics I	3	PHYSICS 350 Modern Physics	3
PHYSICS 330 Methods of Theoretical Physics	3	PHYSICS Major Elective (300/400 level) (420 recommended)	3
PHYSICS Major Elective (300/400 level) (395L recommended)	3	GECDV Culture & Diversity	3
GECUE Civic & Urban Engagement	3	General Elective (300-level or higher)	3
General Elective	3	General Elective	3
TOTAL	**15**	**TOTAL**	**15**

FOURTH YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
PHYSICS 472 Introduction to Quantum Mechanics	3	PHYSICS Major Elective (300/400 level)	3
General Elective (300-level or higher)	3	General Elective (300-level or higher) (Writing Intensive course if not yet completed)	3
General Elective (300-level or higher)	3	General Elective	3
General Elective	3	General Elective	3
General Elective	3		
TOTAL	**15**	**TOTAL**	**12**

Additional Graduation Requirements: Civics Exam, HElghten Exit Exam.

Total Credits to Graduate: 120

UMKC School of Science & Engineering · SS&C Student Services Center
336 Flarsheim Hall · 5110 Rockhill Road
816-235-2399 · sse@umkc.edu · sse.umkc.edu

| UNIVERSITY OF MISSOURI-KANSAS CITY |

School of Science and Engineering

Why Major in Physics

Beyond The Classroom

Students continue to build experience by participating in our **student-led teams or organizations** such as:

- American Institute of Aeronautics and Astronautics (AIAA)
- Astro-Hour
- Design Build Fly (Aeroos)
- Esports
- Society of Physics Students (SPS)
- UMKC Robotics
- Women in Science

Students have access to the **Warko Observatory** which provides a view of the moon, Venus, Mars, Jupiter, Saturn, bright star clusters, and maybe even nebulae and galaxies.

Students can also attend **Astro-Hour** featuring discussions about recent discoveries, advancements, and unresolved problems in the fields of **astronomy, astrophysics and cosmology**.

Personalize Your Degree

Our program allows students the flexibility to:

- Earn a **BS or BA** in Physics
- Pursue an **Emphasis in Astronomy**
- Easily **add minors**
- **Double major** with a BA degree
- Earn a Geographic Information Systems Certificate

Students can explore their interests and gain real-world experience through **undergraduate research** with the potential of being paid.

UMKC is home to Dr. Anthony Caruso, a Fellow of the **National Academy of Inventors**, for his work with nuclear fingerprinting, high-powered microwave technology, and computer chip size reduction.

Easily earn a **master's degree** through our BS to MS program which allows students to complete a graduate degree at undergraduate tuition rates.

After Graduation

SSE connects students with industry partners in the area through **information sessions** and two **STEM Career Fairs** to discuss internship opportunities and future employment.

The innovative research conducted at UMKC can help students realize new avenues open to them and leads many to pursue **graduate degree programs or professional school**.

A physics background allows students the flexibility to **pursue a variety of career paths**:

- astrophysicists
- data scientists
- geophysicists
- medical physicists
- physical scientists
- process engineers/quality engineers
- quantum physicists
- variety of jobs within education and research

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