

PHYSICS AND ASTRONOMY

Welcome

These catalog pages are here to guide you regarding the central facts of the degree programs offered by Physics and Astronomy.

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Faculty

Curators' Professors:

Anthony N. Caruso

Professors:

Daniel H. McIntosh, Da-Ming Zhu

Associate Professors:

Fred M. Leibsle, Elizabeth P. Stoddard, Paul Rulis, Leila Borvayeh

Professors Emeriti:

Paul J. Bryant, Wai-Yim Ching (Curators' Professor), Richard D. Murphy, Marvin R. Querry (Curators' Professor), John R. Urani

Associate Professors Emeriti:

James R. Beacham, Richard C. Waring

James R. Beacham; Associate Professor Emeritus of Physics; B.S., M.S., Ph.D. (Purdue University).

Leila Borvayeh; associate teaching professor; B.S., M.S. (Chamran University of Ahwaz); Ph.D. (University of Calgary).

Paul J. Bryant; Professor Emeritus of Physics; B.S. (Rockhurst College); M.S., Ph.D. (St. Louis University).

Anthony Caruso^{2,3}; Curators' Professor of Physics; B.A. (Bethany College); M.S., Ph.D. (University of Nebraska).

Fred M. Leibsle; Chair, Associate Professor of Physics; B.S. (University of Wisconsin); Ph.D. (University of Illinois).

Daniel H. McIntosh^{2,3}; Professor of Physics; B.S. (University of California, LA); Ph.D. (University of Arizona).

Richard D. Murphy; Professor Emeritus of Physics; B.A. (University of Colorado); M.A., Ph.D. (University of Minnesota).

Michelle Paquette, Associate Research Professor; B.Sc. Chemistry, University of Guelph, Ontario, Canada; Ph.D. Chemistry, University of Victoria, British Columbia, Canada

Marvin R. Querry; former Vice Chancellor, Academic Affairs, and Curators' Professor Emeritus of Physics; B.S. (University of Missouri-Kansas City); M.S., Ph.D. (Kansas State University).

Paul Rulis^{2,3}; Associate Professor of Physics; B.S. (Virginia Tech); Ph.D. (University of Missouri-Kansas City).

Elizabeth P. Stoddard²; Associate Professor of Physics; B.A. (William Jewell College); M.S., Ph.D. (Washington University).

John R. Urani; Professor Emeritus of Physics; B.S., M.S., Ph.D. (University of Missouri-Columbia).

Richard C. Waring; Associate Professor Emeritus; B.A. (William Jewell College); M.A. (University of Arkansas).

Da-Ming Zhu^{2,3}; Professor of Physics; B.S. (University of Science and Technology of China); M.S., Ph.D. (University of Washington).

¹ Associate or Adjunct Graduate Faculty

² Members of UMKC Graduate Faculty

³ Members of UMKC Doctoral Faculty

⁴ Located at UM-St. Louis campus

Undergraduate Undergraduate Admissions

There are no special prerequisites for beginning either the Bachelor of Arts (BA) or the Bachelor of Science (BS) degree programs in Physics. High-school physics and a good working knowledge of algebra and arithmetic are desirable for entering the BS program. However, any deficiencies may be overcome by taking the appropriate coursework.

Students that are interested in pursuing Teacher Certification in Physics should contact the School of Education, Social Work and Psychological Sciences for admissions and advising.

Undergraduate Programs

- Astronomy Minor (<https://catalog.umkc.edu/colleges-schools/science-engineering/physics-astronomy/astronomy-minor/>)
- Physics Minor (<https://catalog.umkc.edu/colleges-schools/science-engineering/physics-astronomy/physics-minor/>)
- Bachelor of Arts: Physics
- Bachelor of Science: Physics
- Bachelor of Science: Physics with an Emphasis in Astronomy (<https://catalog.umkc.edu/colleges-schools/science-engineering/physics-astronomy/physics-bs-astro-emph/>)
- Bachelor of Science: Physics and Electrical & Computer Engineering Double Degree (<https://catalog.umkc.edu/colleges-schools/science-engineering/physics-astronomy/physics-engineering/>)
- Teacher Certification in Physics

Career Implications of the Bachelor's Degree in Physics

The BS/BA degree is recommended for students interested in seeking employment in any organization that requires a strong science or technology background. Graduates with a physics degree who enter fields other than science and technology generally find that the reasoning skills and quantitative problem-solving strategies that are developed in a physics program will help their career advancement.

Students that earn a BS degree in Physics are well positioned for continuing their education in graduate school and professional/medical school while those attaining a BS or BA degree in Physics are well positioned for entering the job market in virtually any field of endeavor. There are many career opportunities for holders of either the BS or BA degree in Physics including such possibilities as: researcher in a government/corporate lab, engineer (electrical, mechanical, etc.), science journalist, technology entrepreneur, financial/actuarial analyst, hardware/software developer, chemist, K-12 educator, materials scientist, meteorologist/seismologist, health practitioner, legal analyst, elected political official, etc.

Undergraduate course offerings are available in the course offerings (<https://catalog.umkc.edu/course-offerings/undergraduate/>) section of the catalog.

Graduate Graduate Programs:

- Master of Science in Physics
- Natural Sciences Ph.D. Program in Physics (<https://catalog.umkc.edu/colleges-schools/graduate-studies/physics/>) (School of Graduate Studies Catalog Section)