Are you interested in learning more about the fundamental laws of nature that explain how the universe of matter and energy really works? Are you interested in studying physics in a small college liberal arts environment? If so, the Marietta College Physics Department may be the place for you. Thanks to a generous gift from David M. Rickey (a 1978 Marietta graduate with a major in mathematics and a concentration in physics) and Jan Nielson, through the J & D Family Foundation, the physics program at Marietta has undergone a significant expansion and enhancement.

**Physics Program**

The Physics Program at Marietta College is intended to provide students with a rigorous and thorough background in theoretical, experimental, and computational physics. The Program consists of two majors: the Physics Major and the Applied Physics Major. Both majors follow the same basic curriculum for the first two years including courses in modern, experimental, and mathematical physics. The details of the final two years can vary depending on student interests. A research-oriented capstone project is required of all majors. A Physics Minor is also available and could be of value to students pursuing a wide choice of majors.

The **Physics Major** is intended primarily to prepare graduates for entry into top-quality graduate or professional schools. The advanced curriculum includes: two-course sequences in classical mechanics, electricity and magnetism, and quantum mechanics; special topics courses; and a graduate assistant preparation course. Through these classes, laboratories, directed research, and summer internships, graduates of the program will be well prepared for graduate study in areas such as physics, applied physics, astronomy, and engineering. The Physics Major also provides a strong preparation for careers in medicine, law, and education.

The **Applied Physics Major** is intended to prepare students for engineering school phase of the 3-2 Engineering Binary Program, entry-level employment in a variety of technical fields immediately following graduation, or
for further study in fields such as applied science, science education, medicine, law, or business. The final two years of the Applied Physics Major involve selected course work and research chosen from among a variety of applied topics in physics and cognate areas in the sciences, mathematics, computer science, and engineering. Marietta has 3-2 programs (resulting in a B.A. from Marietta and a B.S.E. in engineering) with Case Western Reserve University, Columbia University, Ohio University, the University of Pennsylvania, and Washington University in St. Louis.

Physics Faculty

Stanley F. Radford, Associate Professor, Chair, and Rickey Professor of Physics: Dr. Radford’s current research is a theoretical investigation of quarkonium spectroscopy in quantum chromodynamics. Other particle theory research has included renormalization theory and gravitation. Dr. Radford has also performed research and development in industry, investigating physics and technology issues in marine and terrestrial remote sensing, fiber optic phenomenology and system design, and photonics.

Dennis E. Kuhl, Assistant Professor: Dr. Kuhl’s primary research interest is the interaction of gas molecules at metal surfaces in ultrahigh vacuum. Previously, he held a research position at the Center for Science and Mathematics Teaching at Tufts University where he explored innovative strategies to improve student learning of physics. He is interested in applying the results of physics education research to the classroom.

Michael D. Seale, Assistant Professor and Rickey Professor of Physics: Prior to coming to Marietta College, Dr. Seale served as the Physics Department head at Thomas Nelson Community College. He has also worked as a National Research Council Associate at NASA Langley Research Center where he was involved with the High-Speed Research program. His main research interests are in ultrasonic materials evaluation (non-destructive evaluation).

Student Scholarships

Rickey Scholarships in Physics are competitive, based on academic achievement and promise, and are available to full-time students who intend to pursue the Physics Major with the goal of continuing on to graduate school and a scientific or technical career. These scholarships of up to $18,000 per year are renewable annually (up to a total of $72,000 over four years) provided the recipient continues to major in physics, is making satisfactory progress in the Physics Major curriculum, and meets the specified academic criteria.

Student Research Opportunities

Recipients of Rickey Scholarships in Physics are eligible to receive up to two $3,000 Summer Research Grants to support participation in approved undergraduate research programs or internships during the summers prior to the junior and senior years. Summer Research Grants also will be available on a competitive basis to all other students pursuing the Physics Major. Opportunities for summer research are also available through the college-wide Investigative Studies Program.

New Building

A portion of the Rickey gift constituted the lead contribution for construction of a new building, which combines with the Selby and Bartlett Buildings to form the Rickey Science Center. This new, state of the art science
center is occupied by the Physics Department along with the Biology, Chemistry, Environmental Science, and Physician Assistant programs.

**New Equipment**

A portion of the Rickey gift has been set aside as an endowed equipment fund, so the department will be able to regularly purchase and maintain new, state-of-the-art physics equipment.

**Commitment to Teacher Education**

A portion of the Rickey gift has been used to endow the *Rickey Summer Science Institute* for high-school physics teachers. Through shared exploration of contemporary developments in physics, and through investigation of new learning and teaching models, we hope to be able to contribute to the national effort to improve the quality of physics education in the U.S.

**Why Marietta?**

The study of Physics at Marietta comes with several advantages: the overall high quality of Marietta College, small class size, and committed faculty. Marietta has a history of very high quality teaching, advising, staff support, and personal attention. Our faculty members are committed to the study of physics within the wider context of the liberal arts tradition. They continue to perform significant research in specialized fields, yet maintain broad intellectual horizons. They are accessible to students. Student research opportunities are varied and readily available. At Marietta you will be challenged. You will work hard. You will be noticed.

**For More Information**

We strongly encourage you to schedule a visit through the Office of Admission (1-800-331-7896). Be sure to ask for an appointment with a Physics faculty member. During your visit you can meet with an Admission counselor, take a campus tour, sit in on a class, talk personally with the physics faculty, talk with students, find out first-hand about scholarships and financial aid, and learn more about our Physics Program. To find out more, or for further contact information visit the Marietta College Department of Physics web site at [http://www.marietta.edu/~phys](http://www.marietta.edu/~phys).