

PHYSICS

College of Natural Science and Mathematics
Department of Physics
907-474-7339
<http://www.uaf.edu/physics/>

M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30-33 credits; Ph.D.: 18 thesis credits

Advanced study at the graduate level is offered in various areas of physics and applied physics, including many of the research specialties found at the UAF's Geophysical Institute. Faculty and student research programs currently emphasize space physics, infrasonics, complex dynamics of nonlinear systems, ice physics and condensed matter physics.

The M.S. degree with computational physics concentration provides expertise in advanced computing environments, in the relevant mathematical foundations and in the specific physics discipline. It is directed toward students with undergraduate academic backgrounds in physics or other closely associated fields, such as engineering, that have the appropriate physics course work. This degree is relevant for students seeking careers in any areas that require expertise in computational modeling and simulation of physical systems.

The M.S. degree with space physics concentration focuses on the physics of upper atmospheres, ionospheres, magnetospheres and the interplanetary medium. It includes core physics courses and specialty courses in space physics, aeronomy, magnetospheric and auroral physics, and advanced plasma physics. The specialty courses support graduate research with faculty members at UAF's Geophysical Institute, and include areas such as numerical simulations and time-series analysis. Additional courses such as radiative transfer and physics of fluids provide added breadth.

Master's Degrees

- M.S., Physics (<http://catalog.uaf.edu/archives/2018-2019/graduate/graduate-degree-programs/physics/ms>)
- M.S., Physics with Computational Physics Concentration (<http://catalog.uaf.edu/archives/2018-2019/graduate/graduate-degree-programs/physics/computational-ms>)
- M.S., Physics with Space Physics Concentration (<http://catalog.uaf.edu/archives/2018-2019/graduate/graduate-degree-programs/physics/space-ms>)

Ph.D. Degree

- Ph.D., Physics (<http://catalog.uaf.edu/archives/2018-2019/graduate/graduate-degree-programs/physics/phd>)