Physics, Space

College of Natural Science and Mathematics
Department of Physics
(907) 474-7339
www.uaf.edu/physics/

M.S., Ph.D. Degrees

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

Space physics 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.

Graduate Program—M.S. Degree

1. Complete the general university requirements (page 176).
2. Complete the master's degree requirements (page 180).
3. Complete four of the following:
   PHYS 626—Fundamentals of Plasma Physics.....3
   PHYS 627—Advanced Plasma Physics.....3
   PHYS 629—Methods of Numerical Simulation in Fluids and Plasma.....3
   PHYS 672—Magnetospheric Physics.....3
   PHYS 673—Space Physics.....3
4. Complete the thesis or non-thesis requirements:

Thesis

a. Complete the following:
   PHYS 699—Thesis.....6-12
   Approved PHYS electives.....12
b. Minimum credits required..... 30-33

Non-Thesis

a. Complete the following:
   Approved PHYS electives.....18
   PHYS 698—Research.....3-6
b. Minimum credits required..... 30-33

Graduate Program—Ph.D. Degree

1. Complete the general university requirements (page 176).
2. Complete the Ph.D. degree requirements (page 180).*
3. Complete and pass a written and oral comprehensive examination.
4. Demonstrate competency in a foreign language or a research tool.
5. Minimum credits required.....18

** Complete in accordance with the physics department's policies and procedures manual for graduate students.*

See Physics.

Note: Page numbers refer to the UAF 2006-2007 academic catalog, which can be viewed online at www.uaf.edu/catalog/.