

Physics, MS - Atmospheric Sciences Concentration

The Atmospheric Sciences Concentration of Physics MS prepares students for professional careers in Atmospheric Sciences, and further study toward a Ph.D. in Atmospheric Sciences. This concentration will become an important feeder program for the concentration in Atmospheric, Environmental and Energy Science of the AST Ph.D. program.

Degree Requirements:

Total credit hours: **30**

- Core Courses (**12** credits, six from group I and six from group II)
Group I (AST 851, AST 850, AST 854, and AST 858)
Group II (PHYS 600, PHYS 615, PHYS 620, and PHYS 630)

Thesis Option:

- Take **9** credits of additional electives from the Elective List (with a minimum of 6 credits from the AST electives)
- PHYS 797 MS Thesis (**6** credits)
- PHYS 789 Graduate Seminar in Atmospheric Sciences (1 credit, repeated twice for **3** total credits)

Project Option:

- Take **12** credits of additional electives from the Elective List (with a minimum of 6 credits from the AST electives)
- PHYS 796 MS Project (**3** credits)
- PHYS 789 Graduate Seminar in Atmospheric Sciences (1 credit, repeated twice for **3** total credits)

Course Option:

- Take **15** credits of additional electives from the Elective List (with a minimum of 6 credits from the AST electives)
- PHYS 789 Graduate Seminar in Atmospheric Sciences (1 credit, repeated twice for **3** total credits)

PHYS 789 Graduate Seminar in Atmospheric Sciences is a course designed for student to practice communication skills, share knowledge learned and research progress made, and learn what is happening in the field of Atmospheric Sciences, It's an interactive course serving as a Lab that tests student understanding gained during the entire MS study.

Elective List:

- AST 850 Physical Meteorology (3)
- AST 851 Dynamic Meteorology (3)
- AST 852 Climatology (3)
- AST 853 Numerical Weather Prediction (3)
- AST 854 Advanced Synoptic Weather Analysis (3)
- AST 855 Principles of Air Quality (3)
- AST 856 Atmospheric Aerosols (3)
- AST 857 Advanced Remote Sensing (3)

AST 858 Tropical Meteorology (3)
AST 859 Advanced Mesoscale Analysis (3)
AST 885 Special Topics (3)
PHYS 600 Classical Mechanics (3)
PHYS 601 Selected Topics in Geophysics (3)
PHYS 602 Intro to Geophysical Research (3)
PHYS 605 Mathematical Methods (3)
PHYS 615 Electromagnetic Theory I (3)
PHYS 620 Quantum Mechanics I (3)
PHYS 630 Statistical Mechanics (3)
PHYS 705 General Physics for Sci Tch I (3)
PHYS 706 General Physics for Sci Tch II (3)
PHYS 715 Electromagnetic Theory II (3)
PHYS 745 Computational Physics (3)
PHYS 770 Research (3)