LIST OF COURSE OFFERINGS 2026 – 2027

SUBJECT TO CHANGE!

For each semester, students should register for a total of 15 credits. Generally, first year students take 10-12 credits of structured courses and 3-5 credits of research.

M.S. core classes are identified with an asterisk.

ATS 699/799 Faculty Sections:
A=Rugenstein; C=Bell; D=Schumacher; E=Kummerow; F=Maloney; G=Randall; H=Miller; I=Kreidenweis; J=Pierce; L=Van Leeuwen; M=Rasmussen; Keys=N; O=van den Heever; P=Chiu; R=Collett; S=Thompson; T=Hurrell; U=Fischer; V=Barnes

Spring 2026

Course	Title	Instructor	Credits
ATS 542	Paleoclimate	M. Rugenstein/ S. Denning	3
ATS 555	Air Pollution	S. Kreidenweis	3
ATS 606*	Introduction to Climate	M. Rugenstein	2
ATS 622*	Atmospheric Radiation	S. Miller	2
ATS 623	Atmospheric Boundary Layer	D. Randall	2
ATS 632	Interpreting Satellite Observations	E. Fischer	2
ATS 641*	Mesoscale Meteorology	K. Rasmussen	2
ATS 681A6	Introduction to Causal Discovery	P.J. van Leeuwen	2
ATS 693*	Responsible Research in Atmospheric Science	J. Collett	1
ATS 710	Geophysical Vortices	M. Bell	3
ATS 715	Atmospheric Oxidation Process	J. Collett	2
ATS 721	Theoretical Topics in Radiative Transfer	C. Chiu	3
ATS 750	Climate Dynamics: Atmospheric Variability	D. Thompson	3
ATS 753	Global Hydrologic Cycle	C. Kummerow	3
ATS 760	Global Carbon Cycle	D. Wu	2
ATS 780A6	African Storms	S. van den Heever	2
ATS 780A9	Earth System Predictability	J. Hurrell	2
ATS 699A-V	Thesis	Staff	Variable
ATS 799A-V	Dissertation	Staff	Variable

Fall 2026

Course	Title	Instructor	Credits
ATS 560	Air Pollution Measurement	J. Collett	2
ATS 601*	Atmospheric Dynamics I	D. Thompson	2
ATS 610	Physical Oceanography	P. J. van Leeuwen	3
ATS 620*	Thermodynamics and Cloud Physics	M. Bell	2
ATS 621*	Atmospheric Chemistry	E. Fischer	2
ATS 640*	Synoptic Meteorology	K. Rasmussen	2
ATS 652	Atmospheric Remote Sensing	C. Kummerow	2
ATS 724	Cloud Microphysics	S. Kreidenweis	2
ATS 735	Mesoscale Dynamics	R. Schumacher	3
ATS 745	Atmospheric General Circulation Modeling	D. Randall	3
ATS 772	Aerosol Physics, Chemistry, Clouds & Climate	J. Pierce	3
ATS 699A-V	Thesis	Staff	Variable
ATS 799A-V	Dissertation	Staff	Variable

Spring 2027

Course	Title	Instructor	Credits
ATS 543	Global Climate Change	S. Denning	2
ATS 556	Climate Intervention to Cool a Warming Planet	J. Hurrell	2
ATS 605	Global Circulation of the Atmosphere	D. Randall	3
ATS 606*	Introduction to Climate	D. Thompson	2
ATS 622*	Atmospheric Radiation	C. Chiu	2
ATS 641*	Mesoscale Meteorology	R. Schumacher	2
ATS 651	Data Assimilation	P. J. van Leeuwen	3
ATS 693*	Responsible Research in Atmospheric Science	J. Collett	1
ATS 716	Air Quality Characterization	E. Fischer	2
ATS 730	Mesoscale Modeling	S. van den Heever	3
ATS 737	Satellite Observation of Atmosphere and Earth	S. Miller	3
ATS 741	Radar Meteorology	M. Bell	3
ATS 742	Tropical Meteorology	E. Maloney	2
ATS 761	Land-Atmosphere Interactions	D. Wu	2
ATS 781A2	Hydrometeorology	K. Rasmussen	2
ATS 699A-V	Thesis	Staff	Variable
ATS 799A-V	Dissertation	Staff	Variable

Fall 2027

Course	Title	Instructor	Credits
ATS 580A1	The Science of Hurricanes	M. Bell	2
ATS 601*	Atmospheric Dynamics I	P. J. van Leeuwen	2
ATS 602	Atmospheric Dynamics II	D. Thompson	2
ATS 604	Atmospheric Modeling	D. Randall	3
ATS 620*	Thermodynamics and Cloud Physics	J. Pierce	2
ATS 621*	Atmospheric Chemistry	S. Kreidenweis	2
ATS 632	Interpreting Satellite Observations	E. Fischer	2
ATS 640*	Synoptic Meteorology	K. Rasmussen	2
ATS 715	Atmospheric Oxidation Processes	J. Collett	2
ATS 78X	TBD	D. Wu	TBD
ATS 699A-V	Thesis	Staff	Variable
ATS 799A-V	Dissertation	Staff	Variable