ATMOSPHERIC SCIENCES (ATM SCI)

ATM SCI 100 Survey of Meteorology
3 cr. Undergraduate.
Concepts and principles of meteorology; cyclones, fronts, thunderstorms, tornadoes, air pollution, and climate. Interpretation of weather maps, charts, and forecasts. 2 hrs lec, 2 hrs lab-dis.
Prerequisites: none.
Course Rules: Counts as repeat of 3 cr ATM SCI 100 taken for 4 cr.
General Education Requirements: NS+
Last Taught: Spring 2023, Fall 2022, Spring 2022, Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 101 Introductory Atmospheric Science Seminar
1 cr. Undergraduate.
Introduction to the Atmospheric Science major and profession. Collegiate success strategies, weather- and climate-related careers, internship and scholarship opportunities.
Prerequisites: none.
Last Taught: Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 109 Thunderstorms, Tornadoes and Hurricanes
3 cr. Undergraduate.
The study of basic processes that lead to dry and moist convection. Characteristic atmospheric structure and cloud microphysical processes that produce thunderstorms, tornadoes and hurricanes.
Prerequisites: none.
General Education Requirements: NS
Last Taught: Summer 2023, Spring 2023, UWinteriM 2023, Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 110 The Origin, Composition, and Structure of the Planetary Atmospheres
3 cr. Undergraduate.
Origin of the solar system, its planets, and planetary atmospheres.
Prerequisites: none.
General Education Requirements: NS
Last Taught: Fall 2022, Spring 2022, Fall 2021, Spring 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 194 First-Year Seminar:
3 cr. Undergraduate.
Specific topics are announced in the Schedule of Classes each time the class is offered.
Prerequisites: none.
Course Rules: Open only to freshmen. Students may earn cr in just one L&S First-Year Sem (course numbers 192, 193, 194).
General Education Requirements: NS
Last Taught: Spring 2019, Fall 2016, Fall 2014, Fall 2012.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 199 Independent Study
1-3 cr. Undergraduate.
For further information, consult dept chair.
Prerequisites: 2.0 GPA; consent of instructor, department chair, and Assistant Dean for Student Academic Services.
Course Rules: May be retaken to 6 cr max.
Last Taught: Spring 2023, Fall 2013, Spring 2013, Spring 2006.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 240 Introduction to Meteorology
4 cr. Undergraduate.
Quantitative approach to understanding fundamental concepts in meteorology. Radiation, heat balance of the atmosphere, thermodynamics, horizontal motion, general circulation, atmospheric observations, clouds, weather map analysis.
Prerequisites: concurrent enrollment in or previous completion of PHYSICS 209, PHYSICS 214, and MATH 232.
Last Taught: Spring 2023, Spring 2022, Spring 2021, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 250 Introduction to Climate Science
4 cr. Undergraduate.
Fundamentals of climate system's inner workings and analysis methods. Climate subsystems and feedbacks, energy balance of the Earth, climates of the past, global warming, internal variability and predictability of climate, dynamical climate models, statistical approaches.
Prerequisites: PHYSICS 120(P), or PHYSICS 209(P) and PHYSICS 214(P); COMPSCI 202(P); and MATH 213(P), MATH 221(P), or MATH 231(P); or consent of instructor.
Last Taught: Spring 2023.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 289 Internship in Atmospheric Sciences, Lower Division
1-6 cr. Undergraduate.
Application of basic knowledge of Atmospheric Sciences in business, organizational, educational, political or other appropriate setting.
Prerequisites: soph st.; 2.50 gpa; cons supervising faculty member.
Course Rules: One cr earned for academic work based on 40 hrs in internship. May be retaken to 6 cr max.
Last Taught: Spring 2015, Fall 2013, Fall 2012, Fall 2011.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 297 Study Abroad:
1-12 cr. Undergraduate.
Designed to enroll students in UWM sponsored program before course work level, content, and credits are determined and/or in specially prepared course work.
Prerequisites: acceptance for Study Abroad Prog.
Course Rules: May be retaken w/chg in topic.
General Education Requirements: NS
Last Taught: UWinteriM 2019, UWinteriM 2018, UWinteriM 2015, UWinteriM 2014.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 299 Ad Hoc:
1-6 cr. Undergraduate.
Course created expressly for offering in a specified enrollment period. Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem.
Prerequisites: none; add'l prereqs may be assigned to specific topic.
Course Rules: May be retaken w/chg in topic.
Last Taught: Spring 2019, Fall 2013, Fall 1994, Fall 1992.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 330 Air-Pollution Meteorology
3 cr. Undergraduate/Graduate.
Pollutant sources and sinks, fundamental pollutant chemistry, monitoring techniques, averaging boundary layers and turbulence, diffusion theories, diffusion models, regional and global-scale pollution problems.
Prerequisites: ATM SCI 240(P); CHEM 102(P); statistics course recommended.
Last Taught: Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 330G Air-Pollution Meteorology
3 cr. Undergraduate/Graduate.
Pollutant sources and sinks, fundamental pollutant chemistry, monitoring techniques, averaging boundary layers and turbulence, diffusion theories, diffusion models, regional and global-scale pollution problems.
Prerequisites: ATM SCI 240(P); CHEM 102(P); statistics course recommended.
Last Taught: Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 350 Atmospheric Thermodynamics
3 cr. Undergraduate/Graduate.
Radiant energy, sensible heat, and atmospheric thermodynamics; the gas laws; hydrostatic and psychrometric equations; dry and moist convection; clouds and their physical and energy relations. Optional field exercise.
Prerequisites: junior standing; MATH 232(P); ATM SCI 240(P).
Last Taught: Fall 2021, Fall 2019.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 350G Atmospheric Thermodynamics
3 cr. Undergraduate/Graduate.
Radiant energy, sensible heat, and atmospheric thermodynamics; the gas laws; hydrostatic and psychrometric equations; dry and moist convection; clouds and their physical and energy relations. Optional field exercise.
Prerequisites: junior standing; MATH 232(P); ATM SCI 240(P).
Last Taught: Fall 2021, Fall 2019.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 351 Dynamic Meteorology I
3 cr. Undergraduate/Graduate.
The role of dynamics in atmospheric physics; equations of motion; symmetric circulation models; gravity waves; Rossby waves, quasi-geostrophy; introduction to instability of atmospheric flows.
Prerequisites: junior standing; ATM SCI 240(P); MATH 233(P).
Last Taught: Fall 2022, Fall 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 351G Dynamic Meteorology I
3 cr. Undergraduate/Graduate.
The role of dynamics in atmospheric physics; equations of motion; symmetric circulation models; gravity waves; Rossby waves, quasi-geostrophy; introduction to instability of atmospheric flows.
Prerequisites: junior standing; ATM SCI 240(P); MATH 233(P).
Last Taught: Fall 2022, Fall 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 352 Dynamic Meteorology II
3 cr. Undergraduate/Graduate.
Circulation, vorticity, potential vorticity; shallow water equations: Poincare, Kelvin, and Rossby waves, energy and enstrophy; quasi-geostrophy for a stratified atmosphere; barotropic and baroclinic instability.
Prerequisites: junior standing; ATM SCI 351(P); MATH 234(P).
Last Taught: Spring 2023, Spring 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 352G Dynamic Meteorology II
3 cr. Undergraduate/Graduate.
Circulation, vorticity, potential vorticity; shallow water equations: Poincare, Kelvin, and Rossby waves, energy and enstrophy; quasi-geostrophy for a stratified atmosphere; barotropic and baroclinic instability.
Prerequisites: junior standing; ATM SCI 351(P); MATH 234(P).
Last Taught: Spring 2023, Spring 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 360 Synoptic Meteorology I
4 cr. Undergraduate/Graduate.
Fundamental principles; synoptic-scale structure and dynamics; equivalent barotropic model; vertical motions; introduction to and application of quasi-geostrophic theory.
Prerequisites: junior standing; MATH 232(P); ATM SCI 240(P).
Last Taught: Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 360G Synoptic Meteorology I
4 cr. Undergraduate/Graduate.
Fundamental principles; synoptic-scale structure and dynamics; equivalent barotropic model; vertical motions; introduction to and application of quasi-geostrophic theory.
Prerequisites: junior standing; MATH 232(P); ATM SCI 240(P).
Last Taught: Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 361 Synoptic Meteorology II
4 cr. Undergraduate/Graduate.
Extension of quasi-geostrophic theory to Q-vectors; isentropic potential vorticity applied to mid-latitude weather systems; fronts and jets.
Prerequisites: junior standing; ATM SCI 360(P).
Last Taught: Spring 2023.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 361G Synoptic Meteorology II
4 cr. Undergraduate/Graduate.
Extension of quasi-geostrophic theory to Q-vectors; isentropic potential vorticity applied to mid-latitude weather systems; fronts and jets.
Prerequisites: junior standing; ATM SCI 360(P).
Last Taught: Spring 2023.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 381 Honors Seminar:
3 cr. Undergraduate.
Selected topics.
Prerequisites: sophomore standing; HONORS 200(P); consent of Honors College director.
Course Rules: May be retaken with change in topic to 9 cr max.
General Education Requirements: NS
Last Taught: Spring 2020, Fall 2018, Spring 2018, Fall 2007.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 460 Mesoscale Circulations
3 cr. Undergraduate/Graduate.
Theory, analysis and forecasting of mesoscale flows, including convective systems, polar lows, terrain and surface-forced flows, jet streams and hurricanes.
Prerequisites: junior standing; ATM SCI 360(R) or consent of instructor.
Last Taught: Spring 2023.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 460G Mesoscale Circulations
3 cr. Undergraduate/Graduate.
Theory, analysis and forecasting of mesoscale flows, including convective systems, polar lows, terrain and surface-forced flows, jet streams and hurricanes.
Prerequisites: junior standing; ATM SCI 360(R) or consent of instructor.
Last Taught: Spring 2023.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 464 Physical Meteorology: Cloud Physics
3 cr. Undergraduate/Graduate.
Formation of cloud droplets, droplet growth by condensation, formation of ice crystals, precipitation processes, weather radars, cloud models.
Prerequisites: junior standing; PHYSICS 210(P); MATH 232(P); ATM SCI 350(P).
Last Taught: Spring 2022, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 464G Physical Meteorology: Cloud Physics
3 cr. Undergraduate/Graduate.
Formation of cloud droplets, droplet growth by condensation, formation of ice crystals, precipitation processes, weather radars, cloud models.
Prerequisites: junior standing; PHYSICS 210(P); MATH 232(P); ATM SCI 350(P).
Last Taught: Spring 2022, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 470 Tropical Meteorology
3 cr. Undergraduate/Graduate.
Dynamics and energetics of tropical circulations. Origins and evolution of equatorial disturbances and easterly waves. Structure and dynamics of tropical cyclones. Hurricane modeling and prediction.
Prerequisites: ATM SCI 351(P) or ATM SCI 360(P).
Last Taught: Spring 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 470G Tropical Meteorology
3 cr. Undergraduate/Graduate.
Dynamics and energetics of tropical circulations. Origins and evolution of equatorial disturbances and easterly waves. Structure and dynamics of tropical cyclones. Hurricane modeling and prediction.
Prerequisites: ATM SCI 351(P) or ATM SCI 360(P).
Last Taught: Spring 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 480 The General Circulation and Climate Dynamics
3 cr. Undergraduate/Graduate.
Historical overview, the zonally symmetric circulation, momentum, heat and water budgets, stationary waves, the El Nino Southern oscillation, global warming, interpentadal variability in the North Atlantic.
Prerequisites: junior standing; ATM SCI 351(P).
Last Taught: Fall 2021, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 480G The General Circulation and Climate Dynamics
3 cr. Undergraduate/Graduate.
Historical overview, the zonally symmetric circulation, momentum, heat and water budgets, stationary waves, the El Nino Southern oscillation, global warming, interpentadal variability in the North Atlantic.
Prerequisites: junior standing; ATM SCI 351(P).
Last Taught: Fall 2021, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 497 Study Abroad:
1-12 cr. Undergraduate/Graduate.
Designed to enroll students in UWM sponsored program before course work level, content, and credits are determined and/or in specially prepared course work.
Prerequisites: jr st; acceptance for Study Abroad Prog.
Course Rules: May be retaken w/chg in topic.
General Education Requirements: NS
Last Taught: UWinteriM 2023, UWinteriM 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 497G Study Abroad:
1-12 cr. Undergraduate/Graduate.
Designed to enroll students in UWM sponsored program before course work level, content, and credits are determined and/or in specially prepared course work.
Prerequisites: jr st; acceptance for Study Abroad Prog.
Course Rules: May be retaken w/chg in topic.
General Education Requirements: NS
Last Taught: UWinteriM 2023, UWinteriM 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 499 Ad Hoc:
1-6 cr. Undergraduate.
Course created expressly for offering in a specified enrollment period. Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem.
Prerequisites: jr st; add'l prereqs may be assigned to specific topic.
Course Rules: May be retaken w/chg in topic.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 500 Statistical Methods in Atmospheric Sciences
3 cr. Undergraduate/Graduate.
Mathematical and statistical tools applicable to the investigation of atmospheric problems; the nature and treatment of atmospheric data.
Prerequisites: junior standing; ATM SCI 240(P) or ATM SCI 350(P), and MATH 232(P) or consent of instructor.
Last Taught: Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 500G Statistical Methods in Atmospheric Sciences
3 cr. Undergraduate/Graduate.
Mathematical and statistical tools applicable to the investigation of atmospheric problems; the nature and treatment of atmospheric data.
Prerequisites: junior standing; ATM SCI 240(P) or ATM SCI 350(P), and MATH 232(P) or consent of instructor.
Last Taught: Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 505 Micrometeorology
3 cr. Undergraduate/Graduate.
Surface energy budget; radiation balance and heat transfer; boundary-layer profiles of wind, temperature and moisture; turbulence and boundary-layer fluxes; evapotranspiration; special topics.
Prerequisites: junior standing; ATM SCI 240(P) and one of the following: ATM SCI 330(P), ATM SCI 350(P), ATM SCI 351(P), or ATM SCI 360(P).
Last Taught: Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 505G Micrometeorology
3 cr. Undergraduate/Graduate.
Surface energy budget; radiation balance and heat transfer; boundary-layer profiles of wind, temperature and moisture; turbulence and boundary-layer fluxes; evapotranspiration; special topics.
Prerequisites: junior standing; ATM SCI 240(P) and one of the following: ATM SCI 330(P), ATM SCI 350(P), ATM SCI 351(P), or ATM SCI 360(P).
Last Taught: Fall 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 511 Seminar in Atmospheric Radiation and Remote Sensing
3 cr. Undergraduate/Graduate.
Basic laws of radiation, absorption and scattering, weather radar, retrieval of soundings, remote sensing and climate, weather satellites.
Prerequisites: junior standing; MATH 232(P); ATM SCI 350(P) and PHYSICS 210(P).
Last Taught: Spring 2022, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 511G Seminar in Atmospheric Radiation and Remote Sensing
3 cr. Undergraduate/Graduate.
Basic laws of radiation, absorption and scattering, weather radar, retrieval of soundings, remote sensing and climate, weather satellites.
Prerequisites: junior standing; MATH 232(P); ATM SCI 350(P) and PHYSICS 210(P).
Last Taught: Spring 2022, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 599 Capstone Experience
1 cr. Undergraduate.
Student writes a paper under supervision of an advisor on an approved topic not covered in the student's regular course work.
Prerequisites: senior standing and consent of instructor.
Course Rules: May be retaken with change in topic to 2 cr max.
Last Taught: Spring 2023, Spring 2022, Spring 2021, Spring 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 600 Data Analytics
3 cr. Undergraduate/Graduate.
overs techniques used to analyze data and test scientific hypotheses for both diagnostic/understanding and prognostic/prediction applications, particularly in the atmospheric and related sciences.
Prerequisites: junior standing, or graduate standing, or consent of instructor.
Course Rules: Counts as repeat of ATM SCI 690 with same topic.
Last Taught: Fall 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 600G Data Analytics
3 cr. Undergraduate/Graduate.
overs techniques used to analyze data and test scientific hypotheses for both diagnostic/understanding and prognostic/prediction applications, particularly in the atmospheric and related sciences.
Prerequisites: junior standing, or graduate standing, or consent of instructor.
Course Rules: Counts as repeat of ATM SCI 690 with same topic.
Last Taught: Fall 2020.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 690 Seminar in Atmospheric Sciences:
1-3 cr. Undergraduate/Graduate.
Intensive topical studies of currently active problem areas.
Prerequisites: junior standing; consent of instructor.
Course Rules: May be retaken with change in topic to 9 cr max. Satisfies L&S Seminar req.
Last Taught: Fall 2018, Fall 2016.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 690G Seminar in Atmospheric Sciences:
1-3 cr. Undergraduate/Graduate.
Intensive topical studies of currently active problem areas.
Prerequisites: junior standing; consent of instructor.
Course Rules: May be retaken with change in topic to 9 cr max. Satisfies L&S Seminar req.
Last Taught: Fall 2018, Fall 2016.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 695 Internship in Atmospheric Sciences, Upper Division
1-6 cr. Undergraduate.
Application of advanced principles of atmospheric sciences in a business, organizational, educational, political or other appropriate setting.
Prerequisites: jr st; 300-level or above course in atm sci; 3.0 gpa in the major; cons supervising faculty.
Course Rules: One cr earned for 40 hrs work. May be retaken to 6 cr max.
Last Taught: Fall 2019, Summer 2019, Fall 2017, Spring 2017.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 699 Advanced Independent Reading
1-3 cr. Undergraduate.
Independent meteorological study.
Prerequisites: jr st, 2.0 GPA, consent of instructor, Department Chair, and Assistant Dean for Student Academic Services.
Course Rules: May be retaken with change in topic to 3 cr max.
Last Taught: Fall 2008, Spring 2007, Spring 2005, Spring 2004.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 700 Statistical Methods in Atmospheric Sciences II: Signal Detection
3 cr. Graduate.
Fundamentals of signal detection in noisy multivariate space-time data sets; empirical orthogonal functions, singular value decomposition, maximum covariance analysis and canonical correlation analysis; Fourier analysis; singular and multivariate spectrum analysis.
Prerequisites: graduate standing in physical sciences or engineering.
Course Rules: Counts as a repeat of ATM SCI 950 with the same topic.
Last Taught: Spring 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 705 Air Pollution Modeling
3 cr. Graduate.
Computational techniques for determining surface fluxes of heat and momentum. Numerical methods for solving advection and diffusion problems; statistical diffusion modeling.
Prerequisites: graduate standing; consent of instructor.
Last Taught: Fall 2022, Fall 2020, Fall 2018, Fall 2016.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 711 Cloud Dynamics
3 cr. Graduate.
Atmospheric applications of turbulent flow theory. Nonprecipitating clouds: structure of individual cumulus clouds, stratocumulus and cumulus boundary layers. Precipitating clouds: thunderstorms, squall lines, hurricanes.
Prerequisites: graduate standing; consent of instructor.
Last Taught: Spring 2021, Spring 2019, Spring 2017, Spring 2015.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 730 Numerical Weather Prediction
3 cr. Graduate.
Numerical methods for predicting atmospheric phenomena; numerical stability and dispersion; implicit and explicit damping methods; physical process parameterization; ensemble data assimilation techniques.
Prerequisites: graduate standing in physical sciences or engineering.
Course Rules: Counts as a repeat of ATM SCI 950 with the same topic.
Last Taught: Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 750 Nonlinear Time Series Analysis
3 cr. Graduate.
Phase space reconstruction; singular spectrum analysis; prediction; dimension estimation; application of nonlinear time series analysis techniques to selected data sets.
Prerequisites: graduate standing; consent of instructor.
Last Taught: Fall 2013, Spring 2012, Spring 2010, Spring 2008.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 761 Advanced Synoptic/Mesoscale Meteorology
3 cr. Graduate.
Advanced analysis techniques for snyoptic/mesoscale diagnoses, case studies of relevant circulation systems; role of planetary, synoptic, and mesoscale flows in system development.
Prerequisites: graduate standing; consent of instructor.
Last Taught: Fall 2022, Fall 2019, Fall 2017, Fall 2015.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 888 Candidate for Degree
0 cr. Graduate.
Available for graduate students who must meet minimum credit load requirement.
Prerequisites: graduate standing.
Course Rules: Fee for 1 cr assessed; unit does not count towards credit load for Fin Aid. Repeatable. Satisfactory/Unsatisfactory only.
Last Taught: Summer 2023, Spring 2022, Summer 2018, Summer 2017.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 943 Seminar: Hydrology:
3 cr. Graduate.
Prerequisites: graduate standing.
Course Rules: Retakable with change in topic to 9 cr max.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 950 Seminar on Topics in Atmospheric Sciences:
3 cr. Graduate.
Selected topics in atmospheric dynamics, satellite meteorology, atmospheric & oceanic convection, air & water pollution, numerical prediction remote sensing, & others.
Prerequisites: graduate standing in physical sciences or engineering.
Course Rules: Retakable with change in topic to 9 cr max.
Last Taught: Spring 2020, Fall 2019, Spring 2018, Fall 2017.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 990 Master's Thesis
1-8 cr. Graduate.
Prerequisites: graduate standing; consent of instructor and completed thesis proposal.
Course Rules: Repeatable to 12 cr max.
Last Taught: Spring 2023, Fall 2022, Spring 2022, Spring 2021.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 997 Doctoral Externship
1-12 cr. Graduate.
Externship for students enrolled in the Atmospheric Science PhD program.
Prerequisites: graduate standing; admis to candidacy for the PhD.
Course Rules: Retakeable to 12 cr max.
Last Taught: Fall 2019, Spring 2019, Fall 2018, Fall 2010.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 998 Doctoral Dissertation
1-12 cr. Graduate.
Prerequisites: graduate standing; admis to candidacy for PhD.
Course Rules: Repeatable.
Last Taught: Summer 2023, Spring 2023, Fall 2022, Summer 2022.
Current Offerings: https://catalog.uwm.edu/course-search/

ATM SCI 999 Advanced Independent Reading
1-12 cr. Graduate.
Independent meteorological study.
Prerequisites: graduate standing; consent of instructor.
Course Rules: Retakable to 12 cr max.
Last Taught: Spring 2023, Fall 2022, Spring 2022, Fall 2021.
Current Offerings: https://catalog.uwm.edu/course-search/