

Master of Science Summary Guide – Atmospheric Sciences

UNDERGRADUATE PREREQUISITE COURSES (Required for Admission)			
<input type="checkbox"/> College Physics 1 Intro Mechanics <input type="checkbox"/> College Physics 2 Elec/Magn, Optics/Heat, etc.	<input type="checkbox"/> Calculus 1 <input type="checkbox"/> Calculus 2 <input type="checkbox"/> Vector Calculus	<input type="checkbox"/> Intro Differential Equations (recommended) <input type="checkbox"/> College Chemistry 1 Inorganic (recommended) <input type="checkbox"/> College Chemistry 2 Inorganic (recommended)	
MASTER'S CORE COURSES			
Minimum 12 units (mandatory for all students)			
<input type="checkbox"/> ATMO 541A Dynamic Met. I	<input type="checkbox"/> ATMO 541B Dynamic Met. II	<input type="checkbox"/> ATMO 551A Physical Met. I	<input type="checkbox"/> ATMO 551B Physical Met. II
ADVANCED ELECTIVES: HOME DEPARTMENT Category 1			
Minimum 15 units in Categories 1 & 2 (Some courses only offered every other year. See Catalog for details.)			
<input type="checkbox"/> ATMO 521 Phys. Climat. <input type="checkbox"/> ATMO 524 Hydroclimatology <input type="checkbox"/> ATMO 529 Objective Analysis <input type="checkbox"/> ATMO 536A Fund. In Atmo <input type="checkbox"/> ATMO 545 Intro Data Assim <input type="checkbox"/> ATMO 555 Atmo-Hyd Rem Sens	<input type="checkbox"/> ATMO 558 Mesoscale Model <input type="checkbox"/> ATMO 569A Air Poll I: Gases <input type="checkbox"/> ATMO 569B Air Poll II: Aero <input type="checkbox"/> ATMO 574A Analys-Forecast I <input type="checkbox"/> ATMO 574B Analys-Forecast II	<input type="checkbox"/> ATMO 579 Boundary Layer <input type="checkbox"/> ATMO 580 Tropical Meteor <input type="checkbox"/> ATMO 589 Atmo Electricity <input type="checkbox"/> ATMO 595B Global Climate Ch. <input type="checkbox"/> ATMO 595C GCMs+Obs	<input type="checkbox"/> ATMO 641 Adv. Atmo & Oceanic <input type="checkbox"/> ATMO 656A Atmo Rad. & Rem <input type="checkbox"/> ATMO 656B Atmo Rad. & Rem <input type="checkbox"/> HWRS 501 Tools for Data Hand. <input type="checkbox"/> HWRS 519 Fund. Surface Water <input type="checkbox"/> HWRS 543A Risk Assess Envir
ADVANCED ELECTIVES: OTHER DEPARTMENTS Category 2 (Courses not listed must be pre-approved by the HAS Academic Committee)			
<input type="checkbox"/> CE 523 Hydrology <input type="checkbox"/> GC 572 Global Biogeochem Cyc <input type="checkbox"/> GEOG 530 The Climate System <input type="checkbox"/> GEOG 539A Intro Dendrochron <input type="checkbox"/> GEOG 547 Global-Reg Climate	<input type="checkbox"/> GEOS 567 Inverse Prob Geophys <input type="checkbox"/> GEOS 573 Earth System Mod. <input type="checkbox"/> GEOS 578 Global Change <input type="checkbox"/> GEOS 579 Intro Climate Dynam <input type="checkbox"/> GEOS 582 Paleoclimatology	<input type="checkbox"/> PTYS 537 Physics of the Sun <input type="checkbox"/> PTYS 544 Physics of High Atmos. <input type="checkbox"/> PTYS 517 Atmo & Remote Sens <input type="checkbox"/> REM 590 Intro Rem Sens <input type="checkbox"/> RNR 527 Earth Chg Carbon Cycle	<input type="checkbox"/> WSM 502 Air+Water: PhysFluids <input type="checkbox"/> WSM 560A Watershed Hydr <input type="checkbox"/> WSM 696M MATLAB Envir Data <input type="checkbox"/> WSM 696Q Prac/Appl Hydromet <input type="checkbox"/> BE 585 Rem. Sen. Data & Meth.
SEMINAR			
2 units (one per semester)			
<input type="checkbox"/> HWRS 595A Current Topics in Hydrology & Atmospheric Sciences – Grade is S, P, or K and does not count toward cumulative GPA.			
PROGRAMMING COMPETENCE & PROFESSIONAL DEVELOPMENT			
<input type="checkbox"/> All students must demonstrate competence in statistics and computer programming (e.g. FORTRAN, MatLab, GrADS, NCL), numerical atmospheric models and specialized instrumentation. Participation in laboratory or field work may be a component. Competence may be demonstrated by successful completion of approved courses in these subjects (undergraduate or graduate level).		<input type="checkbox"/> All students must present the results of their research in a formal seminar or presentation at a scientific meeting in the form of an oral or poster presentation. Typically, students present at the HAS annual student research conference, El Día del Agua y la Atmósfera (Spring Semester) or at AGU (December) or AMS (January) meetings.	
RESEARCH OR THESIS*			
Minimum 3, maximum 4			
<input type="checkbox"/> ATMO 900 Research (3 units minimum)	<input type="checkbox"/> ATMO 910 Thesis (3 units minimum)		

Need details? → schedule.arizona.edu or catalog.arizona.edu or has.arizona.edu/graduate-information (see MS ATMO)

Updated 02/17/25

TYPICAL MASTER'S PROGRAM

Semester	Course	Units
Fall: Year 1	ATMO 541A	3
	ATMO 551A	3
	ATMO xxx (elective)	3
Spring: Year 1	ATMO 541B	3
	ATMO 551B	3
	ATMO xxx (elective)	3
Fall: Year 2	ATMO xxx (elective)	3
	XXXX xxx (elective)	3
	ATMO 900/910 Research or Thesis	2
	HWR5 595A Seminar	1
Spring: Year 2	ATMO xxx (elective)	3
	ATMO 900/910 Research or Thesis	2
	HWR5 595A Seminar	1
	<i>Qualifying Exam (Optional)</i>	
Total Units		33

ACADEMIC PROGRESS BENCHMARKS

Year 1: Begin course work and select a Major Advisor to chair your committee & submit request for Transfer Course Work form (if applicable), and submit Master's Plan of Study

End Year 2: Complete course work; finish research and submit for publication; submit Committee Appointment form & take Qualifying Exam if continuing in PHD

Refer to the [ATMO Master of Science Degree Handbook](#) for details about *the Research Topic, the Thesis, the Scholarly Paper, and Special Notes*, see <http://has.arizona.edu/master-science-atmospheric-sciences>.

DOCTORAL QUALIFYING EXAM

An MS student who plans to continue in the doctoral program must have met all core course requirements with an average of 2 As and 2 Bs in order to waive the Qualifying exam by MS major advisor. **Continuing students** must submit the PhD application to the Graduate College to meet the appropriate deadline—January 15

MASTER OF SCIENCE GRAD PATH FORMS

Once matriculated into a degree program, **Continuous Enrollment** is required (fall/spring). **Summer enrollment** is not required *unless* you need to complete program requirements. All requirements should be completed within **10 years** (from first course work) to ensure currency of knowledge

GradPath FAQ, <https://grad.arizona.edu/gsas/gradpath/faq?audience=35>

Responsible Conduct of Research Statement

All students complete this form. Additionally, an RCR Workshop is required for any student funded by an NSF or NIH grant.

Master's Plan of Study

Submit plan of study after second semester in residence (end of 1st year)
All courses taken, future courses (major and minor), transfer courses, and research/thesis units must be included in the form.

Master's Committee Appointment

Master's committee must consist of three members; at least two must be current tenured, tenure-track, or approved tenure-equivalent UA faculty members. If the third member is not a current tenure-track UA faculty member, he or she must be approved by the Graduate College as a special member. A member who is not a current tenure-track faculty member will not be eligible to serve as sole chair of the committee but can serve as co-chair if approved to do so by the Graduate College.

Commencement Verification

Confirm name to be listed in commencement program, address to send diploma and other logistical contact information after graduation. Deadlines apply to ensure accuracy.

Master's Completion Confirmation

When the student's Advisor and committee members approve the student has completed all degree requirements, the Advisor must contact the Graduate Coordinator to process.

Transfer Credit

A maximum of 12 graduate units (approved by DGS) may be transferred from another university for use in the Plan of Study

Graduate College Petition (use for a variety of reasons)

Petition to take a leave of absence (temporarily suspends continuous enrollment) or extend time to complete a course