Master of Science Plan of Study – Atmospheric Sciences (Effective AY2019-2020)

UNDERGRADUATE PREREQUISITE COURSES		
☐ College Physics 1 Intro Mechanics ☐ College Physics 2 Elec/Magn, Optics/Heat, etc.	☐ Calculus 1 ☐ Calculus 2	☐ Vector Calculus

MASTER'S CORE COURSES **Minimum 12 units** (mandatory for all students)			
☐ ATMO 541A Dynamic Met. I	☐ ATMO 541B Dynamic Met. II	☐ ATMO 551A Physical Met. I	☐ 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.]			
☐ ATMO 524 Hydroclimatology	☐ ATMO 558 Mesoscale Model	☐ ATMO 579 Boundary Layer	☐ ATMO 641 Adv. Atmo & Oceanic
☐ ATMO 529 Objective Analysis	☐ ATMO 569A Air Poll I: Gases	☐ ATMO 580 Tropical Meteor	☐ ATMO 656A Atmo Rad. & Rem
☐ ATMO 536A Fund. In Atmo	☐ ATMO 569B Air Poll II: Aero	☐ ATMO 589 Atmo Electricity	☐ ATMO 656B Atmo Rad. & Rem
☐ ATMO 545 Intro Data Assim	☐ ATMO 574A Analys-Forecast I	☐ ATMO 595B Global Climate Ch.	☐ HWRS 519 Fund. Surface Water
☐ ATMO 555 Atmo-Hyd Rem Sens	☐ ATMO 574B Analys-Forecast II	☐ ATMO 595C GCMs+Obs	☐ HWRS 543A Risk Assess Envir

ADVANCED ELECTIVES: OTHER DEPARTMENTS Category 2 (Courses not listed must be pre-approved by the HAS Academic Committee)			
☐ CE 523 Hydrology	☐ GEOS 567 Inverse Prob Geophys	☐ PTYS 537 Physics of the Sun	☐ WSM 502 Air+Water: PhysFluids
☐ GC 572 Global Biogeochem Cyc	☐ GEOS 573 Earth System Mod.	☐ PTYS 544 Physics of High Atmos.	☐ WSM 560A Watershed Hydr
☐ GEOG 530 The Climate System	☐ GEOS 578 Global Change	☐ PTYS 517 Atmo & Remote Sens	☐ WSM 696M MATLAB Envir Data
☐ GEOG 539A Intro Dendrochron	☐ GEOS 579 Intro Climate Dynam	☐ REM 590 Intro Rem Sens	☐ WSM 696Q Prac/Appl Hydromet
☐ GEOG 547 Global-Reg Climate	☐ GEOS 582 Paleoclimatology	☐ RNR 527 Earth Chg Carbon Cycle	

SEMINAR **2 units** (one per semester)
☐ **HWRS 595A** Current Topics in Hydrology & Atmospheric Sciences – Thursdays at 4 pm. Grade is S, P, or K and does not count toward cumulative GPA.

PROGRAMMING COMPETENCE & PROFESSIONAL DEVELOPMENT	
☐ 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).	☐ 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	
☐ ATMO 900 Research (3 units minimum)	☐ ATMO 910 Thesis (3 units minimum)

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

TYPICAL MASTER'S PROGRAM

Semester	Course	Units
Fall: Year 1	ATMO 541A ATMO 551A ATMO xxx (elective)	3 3 3
Spring: Year 1	ATMO 541B ATMO 551B ATMO xxx (elective)	3 3 3
Fall: Year 2	ATMO xxx (elective) XXXX xxx (elective) ATMO 900/910 Research or Thesis HWRS 595A Seminar	3 3 2 1
Spring: Year 2	ATMO xxx (elective) ATMO 900/910 Research or Thesis HWRS 595A Seminar *Qualifying Exam (Optional)*	3 2 1
	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.

ARIZONA RESIDENCY

Minimum residence/enrollment requirements: 12 units must be completed at the University of Arizona; the remaining required units must be satisfied by University credit, graduate-level courses, including on-campus courses, courses not offered on the main campus, and approved thesis credit in absentia.

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, fall/spring)—see Graduate Catalog for policies. **Summer enrollment** is not required *unless* you complete requirements in the summer. All requirements should be completed within **6 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 thesis units must be included in the form.

Master's Committee Appointment
Master's thesis committees 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.

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

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