

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

UNDERGRADUATE PREREQUISITE COURSES			
<input type="checkbox"/> College Physics 1 Intro Mechanics <input type="checkbox"/> College Physics 2 Electricity and Magnetism OR Optics and Heat (a 2-course sequence)	<input type="checkbox"/> Calculus 1 <input type="checkbox"/> Calculus 2 <input type="checkbox"/> Vector Calculus	<input type="checkbox"/> Statistics/Probability Theory <input type="checkbox"/> Fluid Mechanics/Hydraulics	
MASTER'S CORE COURSES			
Minimum 12 units (mandatory for all students)			
<input type="checkbox"/> ATMO 541A Dyn Meteorology I	<input type="checkbox"/> ATMO 557A Phys Meteorology I	<input type="checkbox"/> HWRS 519 Fund Surface Hydr	<input type="checkbox"/> HWRS 524 Hydroclimatology
REQUIRED ELECTIVE COURSES			
Complete 6 units from EACH of the 3 areas listed below. If course not available in a particular semester, discuss an alternative course w/advisor!			
Numerical Weather & Climate Prediction (6 units)	Systems Science & Methods (6 units)	Data Sciences (6 units)	
<input type="checkbox"/> ATMO 558 Mesoscale Meteorological Modeling <input type="checkbox"/> ATMO 579 Boundary Layer Meteorology <input type="checkbox"/> ATMO 551B Dynamic Meteorology 2	<input type="checkbox"/> HWRS 528 Fund: Systems Approach Hydrologic Modeling <input type="checkbox"/> ATMO 545 Intro to Data Assimilation <input type="checkbox"/> ATMO 555 Intro Remote Sens Atmo & Hydr	<input type="checkbox"/> ARL 590 Remote Sensing Study Planet Earth <input type="checkbox"/> ATMO 529 Objective Analysis Atmo Sciences <input type="checkbox"/> HWRS 513A-B Field Hydr Meth + Anlys (2, 1) <input type="checkbox"/> CE 528 Numerical Methods Hydraulics	
SEMINAR			
1 unit (enroll one semester during residency, preferably first year)			
<input type="checkbox"/> 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			
<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			
<input type="checkbox"/> ATMO or HWRS 900 Research (3 units minimum)		<input type="checkbox"/> ATMO or HWRS 910 Thesis (3 units minimum)	

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

TYPICAL MASTER'S PROGRAM

Semester	Course	Units
Fall: Year 1	ATMO 541A	3
	ATMO 551B	3
	HWRS 528	3
	HWRS 595A Seminar	1
Spring: Year 1	HWRS 519	3
	HWRS 524	3
	ATMO 541B*	3
Fall: Year 2 <i>Qualifying Exam</i>	ATMO 529	3
	REM 590	3
	ATMO 545	3
Spring: Year 2	ATMO or HWRS 910	3
	ATMO 579	3
Total Units		34
*Required for working at the National Weather Service (NWS)		

ACADEMIC PROGRESS BENCHMARKS

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

Year 2: Complete course work; take Qualifying Exam if continuing in PHD; finish research, submit for publication, and take MS final oral exam/defend thesis

Refer to the Master of Science Degree Handbook for details about **Enrollment Requirements, Faculty Committee, Research Topic, Thesis, Scholarly Paper for Publication, and Special Notes.**

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 received an average grade of 2 As and 2 Bs in the four core courses; if not, the adviser must petition the faculty for a waiver to continue. **Continuing students** must submit the Request for Change of Degree Program to the Graduate College. See the Graduate

Coordinator for assistance. When the form is presented to the Department Head for signature, the student's research and course performance will be evaluated by the faculty for a final recommendation.

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.

REQUIRED FORMS

*Login to **Student UAccess** to complete any form*

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)
- Minimum 33 units as described on page 1 which includes 3 (minimum) thesis units
- You are expected to complete all course work and writing for the master's thesis within a 2-year period.

Master's Committee Appointment

- Contact the HYDROMET graduate coordinator for instructions prior to completing this form

Master's Completion Confirmation

- Department will submit this form after you have completed and successfully defended the thesis

Transfer Credit

- A maximum of 6 graduate units *equivalent to required courses* (approved by DGS) may be transferred from another university for 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