Academic Planning Worksheet for B.S. in Atmospheric Sciences: Meteorology Option

Prerequisites: Math & Physics (30 credits total)
Besides **English composition**, these courses (or their equivalent) must be completed prior to registering for the first course in the Core ATM S sequence. Students interested in majoring in Atmospheric Sciences should start taking these courses as soon as possible.

MATH 124 Calculus with Analytic Geometry I (5cr, AWSpS)
MATH 125 Calculus with Analytic Geometry II (5cr, AWSpS)
MATH 126 Calculus with Analytic Geometry III (5cr, AWSpS)
PHYS 121 Mechanics (5cr, AWSpS)
PHYS 122 Electromagnetism (5cr, AWSpS)
PHYS 123 Waves, Light, and Heat (5cr, AWSpS)

Statistics Requirement (4-5 credits total)
One of these courses should be completed as soon as possible as it is a pre-requisite for upper-division ATM S coursework. Both courses have prerequisites. **STAT 390 is recommended for the Data Science Option.**

Q SCI 381 Introduction to Probability and Statistics (5cr, AWSpS) **or**
STAT 390 Statistical Methods in Engineering and Science (4cr, AWSpS)

Core – Atmospheric Sciences (ATM S) (23 credits total)
These courses must be completed **in the order** listed below, beginning with ATM S 301 in Autumn Quarter.

ATM S 220 Exploring the Atmospheric Sciences (1cr)
ATM S 301 Introduction to Atmospheric Sciences (5cr, Aut)
ATM S 340 Introduction to Thermodynamics and Cloud Processes (3cr, Win)
ATM S 370 Atmospheric Structure and Analysis (5cr, Win)
ATM S 321 The Science of Climate (3cr, Spr)
ATM S 341 Atmospheric Radiative Transfer (3cr, Spr)
ATM S 431 Boundary-Layer Meteorology (3cr, Aut)

METEOROLOGY OPTION COURSEWORK (32-36 CREDITS TOTAL)

Courses listed below are required to complete a BS in Atmospheric Sciences in the Meteorology Option and are in addition to Atmospheric Sciences core coursework and UW College of Environment general education requirements.

Advanced Math (Required; 9-12 credits total)
These courses (or their equivalent) should be completed as soon as possible as they are prerequisites for upper-division ATM S coursework. All of these courses have their own prerequisites.

NOTE: Students only need to complete **one** of the sequences listed below.

AMATH 351 Introduction to Differential Equations and Applications (3cr, AWSpS)
AMATH 353 Partial Differential Equations and Waves (3cr, SpS)
MATH 224 Advanced Multivariable Calculus (3cr, AWSpS)

or

MATH 207 Introduction to Differential Equations (3cr, AWSpS)
MATH 208 Matrix Algebra with Applications (3cr, AWSpS)
MATH 209 Linear Analysis (3cr, AWSpS)
MATH 224 Advanced Multivariable Calculus (3cr, AWSpS)

For transfer students – some WA-state community colleges offer equivalents to the courses listed above. Consult your institutional adviser or the **UW Equivalency Guide for more information.*

Atmospheric Sciences Courses (Required; 20 credits total)
These courses must be completed in the order listed below – all courses have prerequisites.

ATM S 358 Fundamentals of Atmospheric Chemistry (3cr, Spr)
ATM S 441 Atmospheric Motions I (3cr, Aut)
ATM S 442 Atmospheric Motions II (5cr, Win)
ATM S 451 Instruments and Observations (4cr, Win)
ATM S 452 Weather Forecasting and Advanced Synoptic Meteorology (5cr, Spr)

Computing (Required; 3-4 credits total)
ATM S 310 Programming for Atmospheric Data Analysis (3cr, Aut) **or**
CSE 160 Data Programming (4cr, AWSpS)

Recommended Additional Coursework (Optional)
ATM S 380 Weather and Climate Prediction (3cr, Win)
ATM S 490 Current Weather Analysis (1cr, repeatable up to six times)

Four-Year Plan for Students Starting as Freshmen (Meteorology Option)

Year 1 (Freshman Year)		
Autumn Quarter	Winter Quarter	Spring Quarter
☐ MATH 124 (5) Calculus with Analytic Geometry I	☐ MATH 125 (5) Calculus with Analytic Geometry II	☐ MATH 126 (5) Calculus with Analytic Geometry III
☐ ATM S 220 (1) Exploring the Atmospheric Sciences	☐ PHYS 121 (5) Mechanics	☐ PHYS 122 (5) Electromagnetism
Year 2 (Sophomore Year)		
Autumn Quarter	Winter Quarter	Spring Quarter
☐ PHYS 123 (5) Waves, Light, and Heat	☐ *AMATH 351 (3) Introduction to Differential Equations and Applications,* **or** ☐ *MATH 207 (3) Introduction to Differential Equations*	☐ *AMATH 353 (3) Partial Differential Equations and Waves,* **or** ☐ *MATH 208 (3) Matrix Algebra with Applications*
☐ MATH 224 (3) Advanced Multivariable Calculus	☐ *Q SCI 381 (4) Introduction To Probability And Statistics,* **or** ☐ *STAT 390 (4) Statistical Methods in Engineering and Science*	
☐ *ATM S 310 (3) Programming for Atmospheric Data Analysis,* **or** ☐ *CSE 160 (4) Data Programming*		
Year 3 (Junior Year)		
Autumn Quarter	Winter Quarter	Spring Quarter
☐ ATM S 301 (5) Introduction to Atmospheric Sciences	☐ ATM S 340 (3) Introduction to Thermodynamics and Cloud Processes	☐ ATM S 321 (3) The Science of Climate
☐ *MATH 209 (3) Linear Analysis (add this course only if chosen the MATH2XX sequence)*	☐ ATM S 370 (5) Atmospheric Structure and Analysis	☐ ATM S 341 (3) Atmospheric Radiative Transfer
		☐ ATM S 358 (3) Fundamentals of Atmospheric Chemistry
Year 4 (Senior Year)		
Autumn Quarter	Winter Quarter	Spring Quarter
☐ ATM S 431 (3) Boundary-Layer Meteorology	☐ ATM S 442 (5) Atmospheric Motions II	☐ ATM S 452 (5) Weather Forecasting and Advanced Synoptic Meteorology
☐ ATM S 441 (3) Atmospheric Motions I	☐ ATM S 451 (4) Instruments and Observations	