

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Ph.D. Course Plan (04/04/2025)**  
**Atmospheric Sciences Graduate Group**

**A. Prerequisites:**

| Course Number | Course Title      | Units | Completion Status<br>(indicate if completed at another institution, at UC Davis or not yet) |
|---------------|-------------------|-------|---------------------------------------------------------------------------------------------|
| MAT 21A       | Calculus          | 4     |                                                                                             |
| MAT 21B       | Calculus          | 4     |                                                                                             |
| MAT 21C       | Calculus          | 4     |                                                                                             |
| MAT 21D       | Vector Analysis   | 4     |                                                                                             |
| PHY 9B        | Classical Physics | 5     |                                                                                             |

**B. Core Requirements (15-20 units)**

Ph.D. students are required to take at least one class from each of the five categories below, which encompass the main areas of the atmospheric sciences. Within each category, students must take one of the courses marked by the asterisk (\*) unless the equivalent course was taken in a prior program. Additional courses to those listed below may be available. A “B” grade average or better is required for the core courses.

| Course Number                                     | Course Title                                       | Units | Term /Year            | Grade |
|---------------------------------------------------|----------------------------------------------------|-------|-----------------------|-------|
| <b>Dynamics emphasis</b>                          |                                                    |       |                       |       |
| ATM 111                                           | Weather Analysis and Prediction                    | 3     |                       |       |
| ATM 121A                                          | Atmospheric Dynamics I (*)                         | 4     |                       |       |
| ATM 121B                                          | Atmospheric Dynamics II (*)                        | 4     |                       |       |
| ATM 221                                           | Advanced Atmospheric Dynamics                      | 3     |                       |       |
| ATM 250                                           | Mesoscale Meteorology                              | 3     |                       |       |
| <b>Climate emphasis</b>                           |                                                    |       |                       |       |
| ATM 115                                           | Hydroclimatology                                   | 3     |                       |       |
| ATM 116                                           | Modern Climate Change                              | 3     |                       |       |
| ATM 215                                           | Advanced Hydroclimatology                          | 3     |                       |       |
| ATM 240                                           | General Circulation of the Atmosphere              | 4     |                       |       |
| ATM 241                                           | Climate Dynamics                                   | 3     |                       |       |
| ATM 245                                           | Climate Change Science and Impacts (*)             | 4     |                       |       |
| <b>Atmospheric Chemistry/Air Quality emphasis</b> |                                                    |       |                       |       |
| ATM 149                                           | Air Pollution                                      | 4     |                       |       |
| ATM 160                                           | Introduction to Atmospheric Chemistry (*)          | 4     |                       |       |
| ATM 231                                           | Advanced Air Pollution Meteorology                 | 3     |                       |       |
| ATM 260                                           | Atmospheric Chemistry                              | 3     |                       |       |
| ECI 242                                           | Air Quality                                        | 4     |                       |       |
| ECI 247                                           | Aerosols                                           | 4     |                       |       |
| ECI 241                                           | Environmental Reactive Chemical Transport Modeling | 4     |                       |       |
| <b>Biometeorological/Boundary Layer emphasis</b>  |                                                    |       |                       |       |
| ATM 124                                           | Meteorological Instruments and Observations        | 3     |                       |       |
| ATM 133                                           | Biometeorology (*)                                 | 4     |                       |       |
| ATM 158                                           | Boundary Layer Meteorology (*)                     | 4     |                       |       |
| ATM 223                                           | Advanced Boundary Layer Meteorology                | 3     |                       |       |
| ATM 233                                           | Advanced Biometeorology                            | 3     |                       |       |
| ECI 289I                                          | Introduction to Turbulence                         | 4     |                       |       |
| <b>Atmospheric Physics emphasis</b>               |                                                    |       |                       |       |
| ATM 120                                           | Atmospheric Thermodynamics and Cloud Physics (*)   | 4     |                       |       |
| ATM 128                                           | Radiation and Satellite Meteorology (*)            | 4     |                       |       |
| ATM 230                                           | Atmospheric Turbulence                             | 3     |                       |       |
| ATM 244                                           | Cloud and Precipitation Physics                    | 3     |                       |       |
|                                                   |                                                    |       | <b>Total Units:</b>   |       |
|                                                   |                                                    |       | <b>Average Grade:</b> |       |

Name: \_\_\_\_\_

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**C. Elective Courses (16-21 units)**

The Ph.D. degree requires additional graduate and upper division undergraduate elective courses chosen to satisfy the four requirements below. Depending on the total number of units of core courses taken, students are required to take between 16 and 21 units of elective courses, for a **minimum of 36 total units**. In addition, a dissertation is required and serves as the capstone requirement. At least 12 units of research (299 or equivalent) are required, but they do not count towards the elective-course requirement or the total-unit requirement. The following elective-course requirements must be met:

|                                                                                                                                                                                                                                                                                                                                         | Completion Status |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| i. Graduate and upper division units beyond the core coursework to complete the <b>36-unit</b> total courses requirement. These elective courses should be chosen with the advice and consent of the Major Professor and/or the ASGG Graduate Advisor.                                                                                  |                   |
| ii. At least 12 units of elective courses must be graduate-level courses that are either in ATM, instructed by an ASGG-affiliated faculty member, or approved by the ASGG Graduate Advisor. These courses are part of requirement i. above.                                                                                             |                   |
| iii. A maximum of 3 units can be taken as S/U.                                                                                                                                                                                                                                                                                          |                   |
| iv. At least 2 units, and at most 4 units, of ATM 290 during which students must give at least one format in-class oral presentation. More details are provided in the ASGG Seminar Guidelines available on the ASGG website ( <a href="https://atm.ucdavis.edu/download_file/323/0">https://atm.ucdavis.edu/download_file/323/0</a> ). |                   |

List the elective courses successfully completed:

| Course Number | Course Title | Units | Term /Year          | Grade |
|---------------|--------------|-------|---------------------|-------|
|               |              |       |                     |       |
|               |              |       |                     |       |
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|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       | <b>Total Units:</b> |       |

**D. Research Units (6 units)**

The research thesis serves as the capstone requirement. At least 6 units of research (299 or equivalent) are required.

| Course Number | Course Title | Units | Term /Year          | Grade |
|---------------|--------------|-------|---------------------|-------|
|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       |                     |       |
|               |              |       | <b>Total Units:</b> |       |